

SERVICE MANUAL

DATSUN PICK-UP
MODEL 620 SERIES
CHASSIS & BODY



NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

SECTION BE

BODY ELECTRICAL SYSTEM

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BODY ELECTRICAL SYSTEM

BODY ELECTRICAL WIRING

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DESCRIPTION

Cables used for body electrical wiring are low tension cables. Their conductors are covered with vinyl of various colors. These various colors are intended to represent use of respective cables. In wiring diagram, these colors are indicated by one or two alphabetical letters. With different colors thus used, such cables gathered together in wiring harness easily reveal their origins and destinations. Basic colors included standard colors and supple-

mentary colors to standard ones are established for cables of respective systems such as starting and ignition system, lighting system and signal system. By designated colors, therefore, you can easily tell circuit systems and starting points of respective cables.

Colors of cables

The system of colors applied to the covering of cable conductors is as shown in the following table:

Circuit system	Standard color	Supplementary color	Supplementary color to standard color
Starting and ignition system	B (Black)	W, Y, R	
Charging system	W (White)	B, R, L	Y
Lighting system	R (Red)	W, B, G, Y, L	
Signal system	G (Green)	W, B, R, Y, L	W, Br (Brown)
Instrument system	Y (Yellow)	W, B, G, R, L	
Others	L (Blue)	W, R, Y	Y, Br Lg (Light green)
Grounding system	B (Black)		

To covering of individual main cable of each system, standard color or supplementary color to standard color is generally applied. Colors are represented respectively by such letters as G, W and Br. Applied to minor item of each circuit's terminal is two-tone

color which is composed of standard and supplementary colors. Each of such two-tone colors is indicated with combination of two letters like RW or GY; and the first letter of each combination stands for standard color, and the second supplementary color.

WIRING HARNESS

Inspection

Referring to wiring diagrams or circuit diagrams, inspect entire electrical wiring and connections and insure:

1. That each electrical component part or cable is securely fastened to its connector or terminal.
2. That each connection is tight in place and free from rust and dirt.
3. That each cable covering shows no evidence of cracks, deterioration or otherwise damage.
4. That each terminal is securely kept away from any adjacent metal parts.
5. That each cable is fastened to its proper connector or terminal.
6. That each grounding bolt is planted tight.
7. That wiring is securely kept away from any adjacent sharp edges of parts or parts (such as exhaust pipe) having high temperature.
8. That wiring is kept away from any rotating or working parts such as fan pulley, fan belts, etc.
9. That cables between fixed portions and resiliently mounted equipment are long enough to withstand shocks and vibratory forces.

Maintenance instructions

1. Before starting to inspect and repair any part of electrical system or other parts which may lead to a short circuit, be sure to disconnect cables at battery terminals.

Disconnect cables at battery terminals in the following manner:

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Disconnect cable at negative \ominus terminal, and then disconnect the other cable at positive \oplus terminal.

Before connecting cables at battery terminals, be sure to clean terminals with a rag. Fasten cable at positive \oplus terminal, and then the other cable at

negative \ominus terminal. Apply grease to top of these terminals to prevent rust from developing on them.

2. Never use a screwdriver or service tool to conduct a continuity test. **Use test leads to conduct this check.**

3. Never ground an open circuit or circuits under no load. **Use a test lamp (12-3W) or circuit tester as a load.**

4. Never disconnect cables by pulling them. Be sure to loosen terminals before disconnecting them.

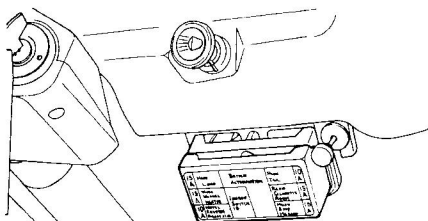
FUSE AND FUSIBLE LINK

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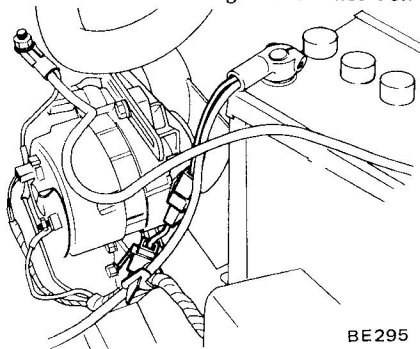
DESCRIPTION

The fuse and fusible link are protective device used in an electric circuit. When current increases beyond rated amperage, fusible metal melts and circuit is broken, and thus, cable and electrical equipment are protected from burning. Whenever fuse is melted for one reason or another, use systematic procedure to check and eliminate cause of trouble before installing new fuse in position.



BE294

Fig. BE-1 Fuse box



BE295

Fig. BE-2 Fusible link

MAINTENANCE INSTRUCTION

Fuse

In nearly all cases, visual inspection can reveal defective fuse. If condition of fuse is questionable, conduct continuity test with use of circuit tester or test lamp.

Notes:

- If fuse is blown off, be sure to eliminate the cause before installing new fuse in position.

Fusible link

Color	Size mm ² (sq in)	Continuous current	Max. current (fuse melts within 5 sec.)
Green	0.5 (0.0008)	20A	Approx. 200A

Melted fusible link can be detected by either visual inspection or finger-tip feeling. If its condition is questionable, use circuit tester or test lamp, as required, to conduct continuity test. This continuity test can be performed in the same manner as for any conventional fuse.

Notes:

- Fusible link carries current as large as 200 amperes when it melts in period of less than five seconds. Under no circumstances should any

b. Use fuse of specified rating. Do not use fuse of more than specified rating.

c. Check fuse holders for conditions. If much rust or dirt is found thereon, clean metal parts with fine-grained sandpaper until proper metal-to-metal contact is made. Poor contact of any fuse holder will often lead to voltage drop or heating in the circuit and, in the worst case, may result in improper operation of circuit.

larger fusible link than that specified be used.

b. Should melting of fusible link occur, it is possible that critical circuit (power supply or large current carrying circuit) is shorted. In such case, carefully check and eliminate the cause of trouble.

c. Never wrap periphery of fusible link with vinyl tape. Extreme care should be taken of this link so that it does not come into contact with any other wiring harness or vinyl- or rubber-parts.

BODY ELECTRICAL SYSTEM

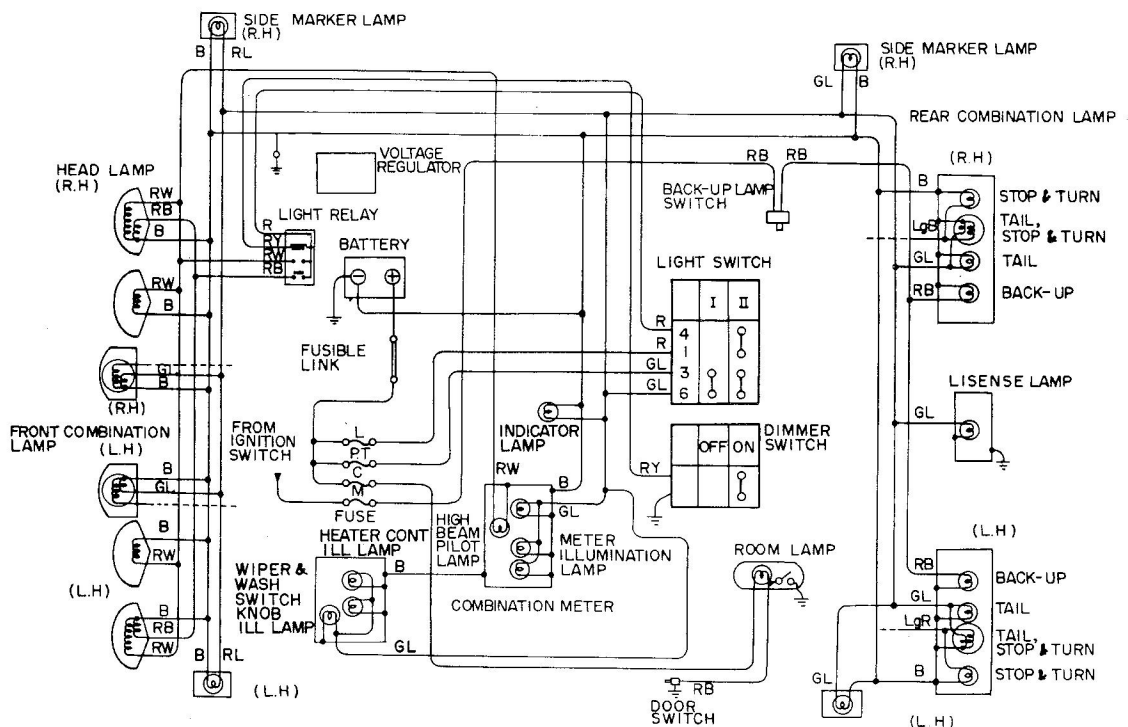
LIGHTING AND SIGNAL LAMP SYSTEM

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DESCRIPTION

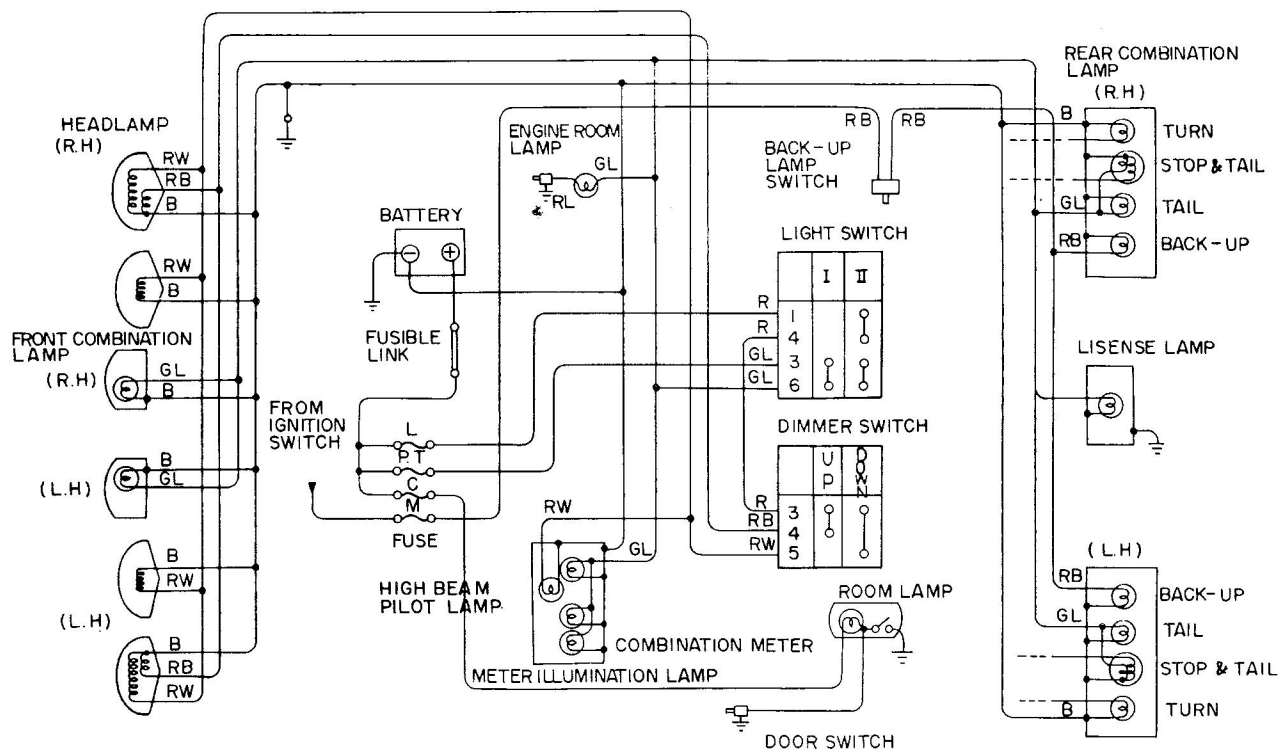
Circuit diagram of lighting system



BE296

Fig. BE-3 Lighting system (U.S.A. and Canada)

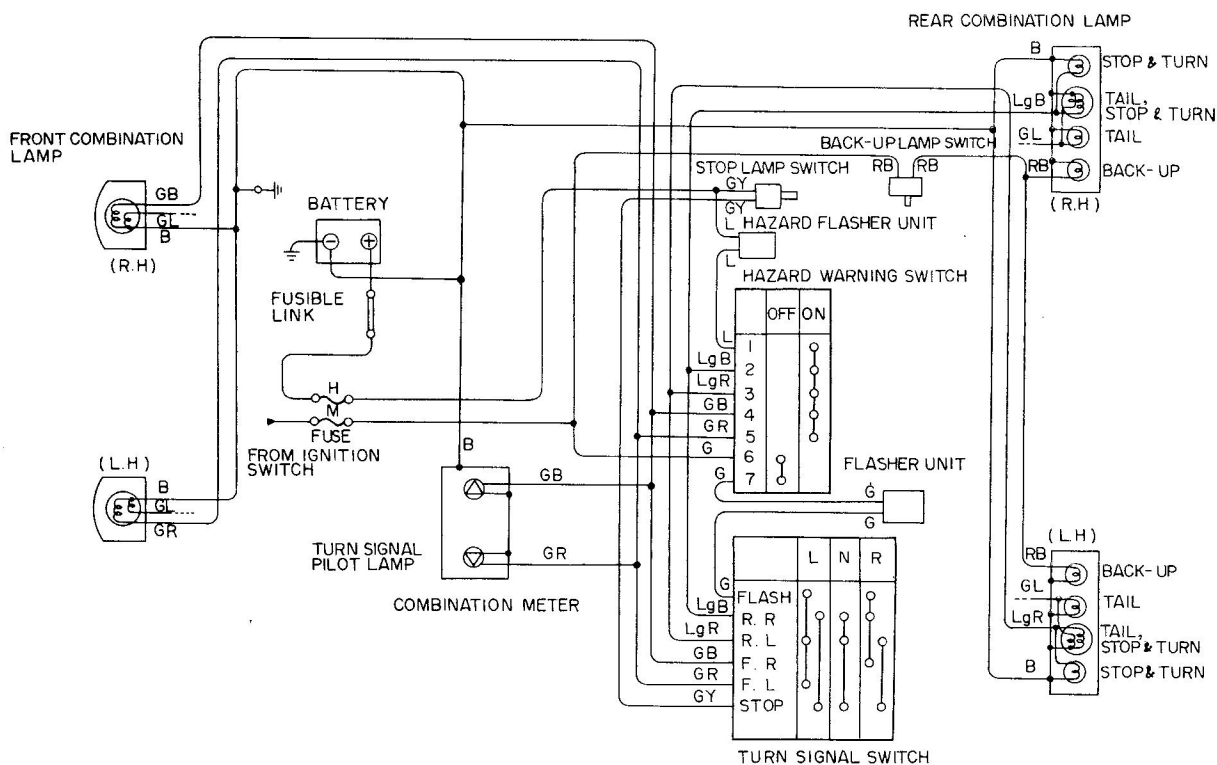
BODY ELECTRICAL SYSTEM



BE297

Fig. BE-4 Lighting system (General areas)

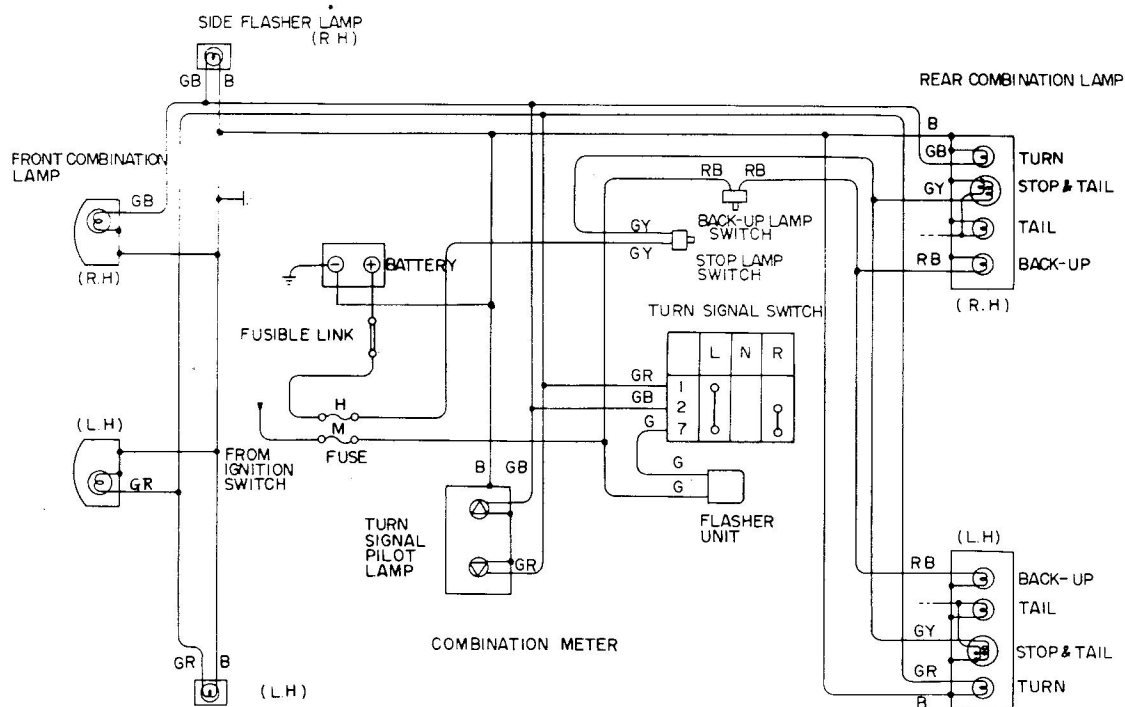
Circuit diagram of signal lamp system



BE298

Fig. BE-5 Signal lamp system (U.S.A. and Canada)

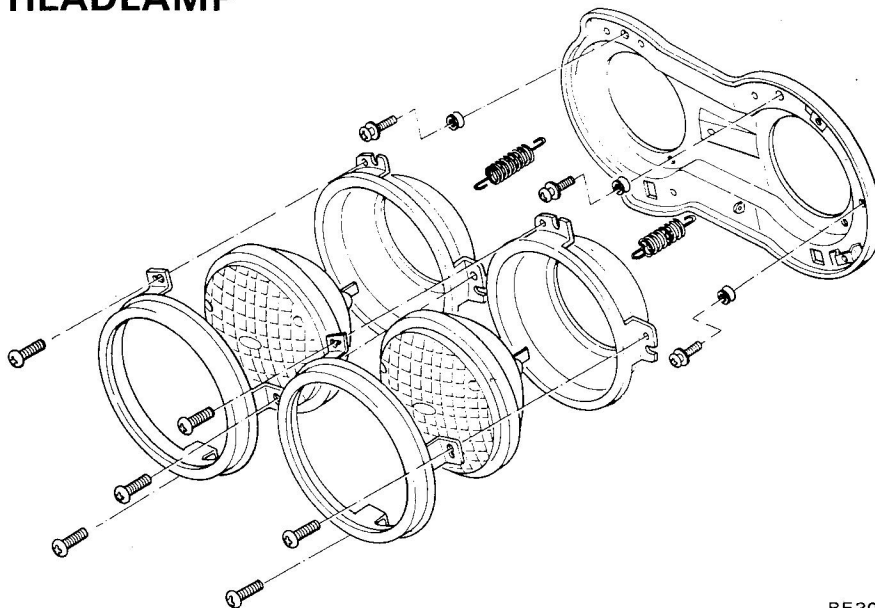
BODY ELECTRICAL SYSTEM



BE299

Fig. BE-6 Signal lamp system (General areas)

HEADLAMP



BE300

Fig. BE-7 Headlamp

Headlamp beam replacement

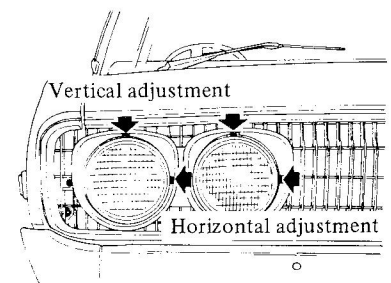
1. Remove radiator grille retaining screws and remove radiator grille.

2. Loosen three headlamp retaining ring screws. It may be unnecessary to remove screws.

Note: Do not disturb aiming adjust screws.

3. Remove retaining ring by rotating it clockwise.
4. Remove headlamp beam from mounting ring and disconnect wiring connector from behind beam.
5. Change headlamp beam and connect wiring connector to new beam.
6. Place headlamp beam in position so that three location tabs behind beam fit in with three hollows on mounting ring. Make sure that sign "Top" of beam lens is on upper side.
7. Install headlamp retaining ring and tighten retaining screws.
8. Place radiator grille in position and tighten retaining screws.

Aiming adjustment



BE301

Fig. BE-8 Aiming adjustment

BODY ELECTRICAL SYSTEM

To adjust vertical aim, use adjusting screw on upper side of headlamp; and to adjust horizontal aim, use adjusting screw on side of headlamp.

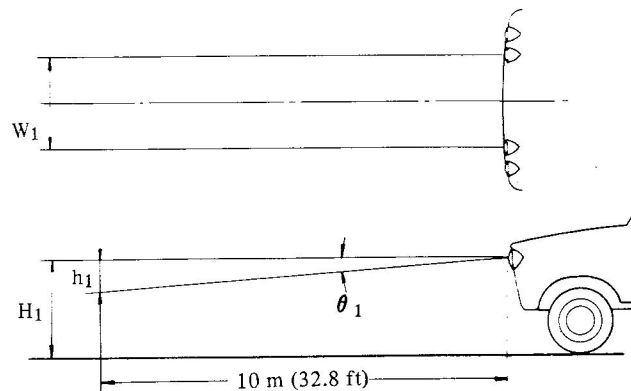
Notes:

Before making headlamp aiming adjustment, observe the following instructions.

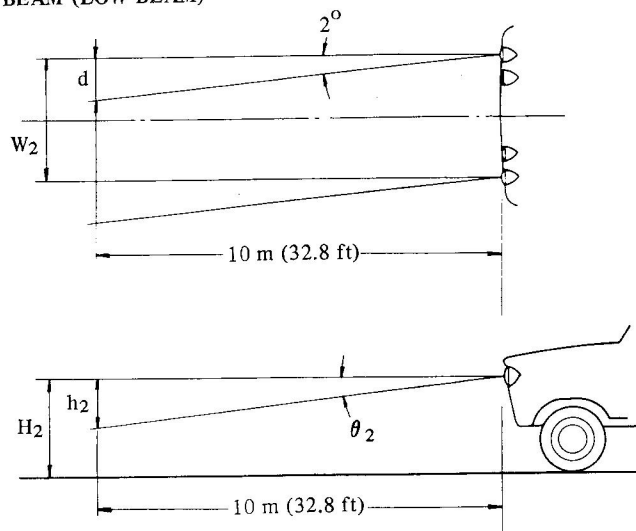
- a. Keep all tires inflated to correct pressures.
- b. Place car and tester on the same flat surface.
- c. See that there is no load in vehicle.
 - 1) Gasoline, radiator and engine oil pan filled up to correct levels.
 - 2) Without passenger

When performing headlamp aiming adjustment, use an aiming device, aiming wall screen or headlamp tester. For operating instructions of any aimer, refer to respective operation manuals supplied with the unit.

DRIVING BEAM (HIGH BEAM)



PASSING BEAM (LOW BEAM)



Item	Driving beam (High beam)				Passing beam (Low beam)				d mm (in)
	H ₁ mm (in)	W ₁ mm (in)	θ ₁ (°)	h ₁ mm (in)	H ₂ mm (in)	W ₂ mm (in)	θ ₂ (°)	h ₂ mm (in)	
Model									
Pick-up	715 (28.15)	780 (30.7)	48'	140 (5.5)	715 (28.15)	1,160 (45.7)	2°18'	392 (15.4)	349 (13.7)
Double Pick-up	680 (26.8)	780 (30.7)	42'	122 (4.8)	680 (26.8)	1,160 (45.7)	1°32'	268 (10.6)	349 (13.7)

BE302

Fig. BE-9 Aiming adjustment

FRONT COMBINATION LAMP

Bulb replacement

1. Remove two retaining screws and lens.
2. Push in on bulb, turn it counterclockwise and remove it from socket.
3. Insert new bulb into socket, press it inward and rotate it clockwise. Make sure that bulb is locked in its socket.
4. Place packing to lamp body in position and install lamp body (with packing), lens and two retaining screws.

Removal and installation

To remove lamp body, disconnect wiring at connector and remove wire grommet from panel. Remove two retaining screws and lens and withdraw lamp body from vehicle.

Install new lamp assembly in the reverse sequence of removal.

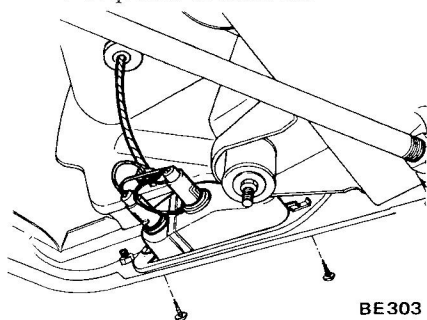


Fig. BE-10 Front combination lamp

SIDE FLASHER LAMP

Bulb replacement

1. Remove two retaining screws, lens and rim.
2. Pull bulb forward to remove it from socket.
3. Push new bulb into socket.
4. Place packing to lamp body in position and install lamp body (with packing), lens and two retaining screws.

Removal and installation

To remove lamp body, disconnect

two lead wires at connectors and remove wire grommet from panel. Remove two retaining screws, lens and rim and withdraw lamp body and wire assembly from vehicle.

Install new lamp assembly in the reverse sequence of removal.

SIDE MARKER LAMP

Bulb replacement

1. Remove two retaining screws, lens and rim.
2. Push in on bulb, turn it counterclockwise and remove it from socket.
3. Insert new bulb into socket, press it inward and rotate it clockwise. Make sure that bulb is locked in its socket.
4. Place packing to lamp body in position and install lamp body (with packing), lens and two retaining screws.

Removal and installation

To remove lamp body, disconnect two lead wires at connectors and remove wire grommet (if so equipped) from panel.

Remove two retaining screws, lens and rim and withdraw lamp body from vehicle.

Install new lamp assembly in the reverse sequence of removal.

ROOM LAMP

Bulb replacement

1. Remove lens from lamp housing.
2. Pull bulb forward and remove it from socket.
3. Push new bulb into socket.
4. Install lens.

Removal and installation

To remove lamp assembly, disconnect battery ground cable, remove two retaining screws with lens removed from lamp housing, dismount lamp

housing from roof rail and disconnect two wires at connectors.

Install new lamp assembly in the reverse sequence of removal.

REAR COMBINATION LAMP

Bulb replacement

Pick-up series

1. Remove six lens retaining screws and lens.
2. Push in on bulb and turn it counterclockwise to remove it from socket.
3. Insert new bulb into socket, press it inward, and rotate it clockwise. Make sure that bulb is locked in its socket.
4. Place lens into position and install retaining screws.

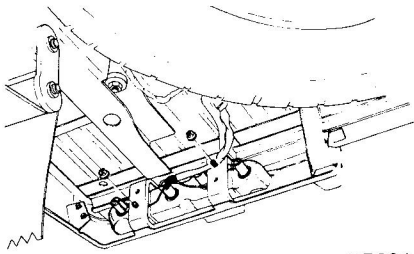
Double Pick-up series

1. Remove tail lamp cover. See Figure BE-12.
2. Turn bulb socket counterclockwise and remove socket from lamp body.
3. Push in on bulb, turn it counterclockwise and remove it from socket.
4. Insert new bulb into socket, making certain that locking pins in base of bulb are in position. Press bulb inward, rotate it clockwise and lock it in socket.
5. Insert socket into lamp housing with locking tab in proper position. Rotate socket clockwise to lock it in lamp body.

Removal and installation

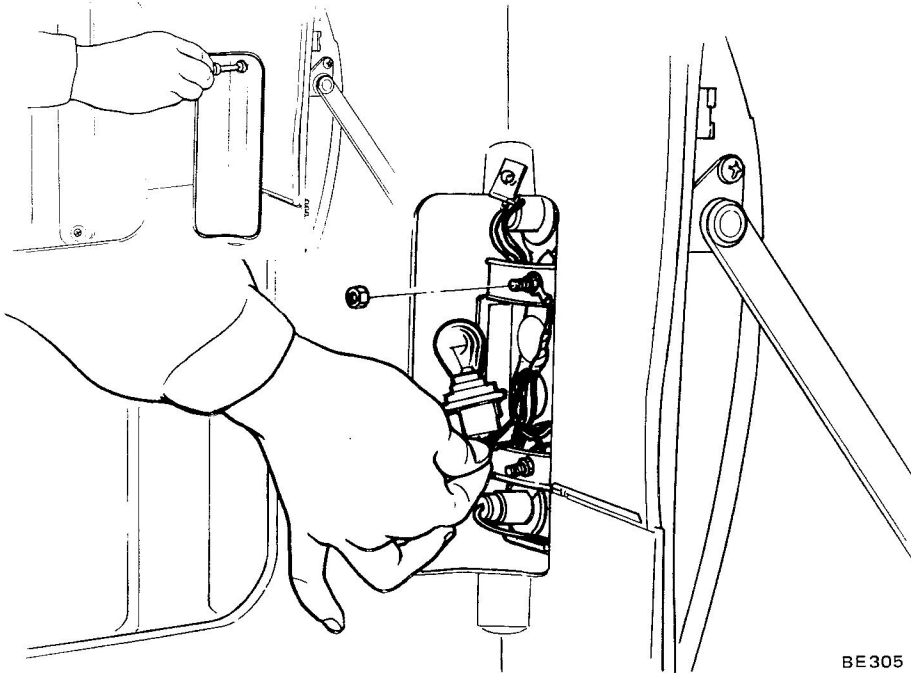
1. Remove tail lamp cover (Double Pick-up series only).
2. Disconnect wiring assembly at connector.
3. Remove two nuts from combination lamp mounting studs.
4. Dismount combination lamp assembly from vehicle.
5. Replace lamp assembly with a new one.
6. Install new lamp assembly in the reverse sequence of removal.

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Fig. BE-11 Rear combination lamp
(Pick-up series)



BE305

Fig. BE-12 Rear combination lamp (Double Pick-up series)

LICENSE LAMP

Bulb replacement

Pick-up series

1. Remove lens retaining screw, if so equipped, and remove lens.
2. Pull out bulb and replace it with a new one.
3. Install lens.

Double Pick-up series

1. Remove two retaining screws and remove rim, lens and packing.
2. Push in on bulb and turn it counterclockwise to remove it from socket.
3. Insert new bulb into socket, press it inward, and rotate it clockwise.

Make sure that bulb is locked in its socket.

4. Place packing, lens and rim and install retaining screws.

Removal and installation

Pick-up series

1. Disconnect lead wire at connector.
2. Remove lamp bracket retaining screws and lamp assembly.
3. Install new lamp assembly in the reverse sequence of removal.

Double Pick-up series

1. Disconnect lead wire at con-

necter.

2. Remove two flange nuts from mounting studs at the back side of rear bumper.
3. Pull lamp assembly out of rear bumper.
4. Install new lamp assembly in the reverse sequence of removal.

ENGINE ROOM LAMP

Bulb can be replaced by pushing in on bulb and turning it counterclockwise.

To replace engine room lamp assembly, remove one screw retaining lamp bracket to lower dash panel and disconnect wires at connectors.

Engine room lamp switch can be replaced by disconnecting lead wire at connector and pulling switch assembly out of its bracket. To install switch assembly to bracket, clean dirt, dust and rust from the opening groove of bracket and press down on switch head until it fits in with bracket.

LIGHTING SWITCH

Removal and installation

1. Disconnect battery ground cable.
2. Press in switch knob, turn it counterclockwise and pull it out of switch.
3. Unscrew escutcheon and remove escutcheon and spacer.
4. Reach up from underneath instrument panel, disconnect lighting switch multiple connector from instrument harness wiring assembly and remove spacer and lighting switch.
5. Install new switch in the reverse sequence of removal.

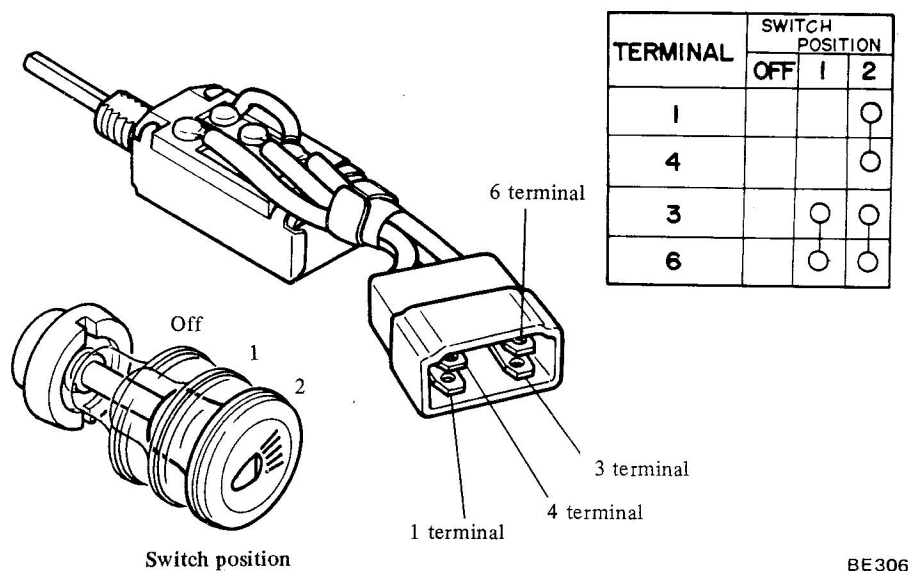
Inspection

Continuity test

Remove lighting switch from vehicle, following the procedures given in "Removal and Installation."

Test continuity through lighting switch by using test lamp or ohmmeter.

BODY ELECTRICAL SYSTEM



BE306

Fig. BE-13 Lighting switch

TURN SIGNAL AND DIMMER SWITCH

Removal and installation

1. Remove steering wheel.

Refer to the related section "Steering."

2. Unhook wiring assembly from clip that retains wiring assembly to lower instrument panel.
3. Disconnect multiple connector

and lead wire from instrument harness wiring.

4. Remove shell covers (Upper and Lower).
5. Loosen two screws attaching switch assembly to steering column jacket and remove switch assembly.
6. Position switch assembly to steering column jacket. Make sure that a location tab (or screw) fits in with hole of steering column jacket.
7. Tighten two attaching screws.
8. Install shell covers.
9. Connect multiple connector and

lead wire to instrument harness wiring.

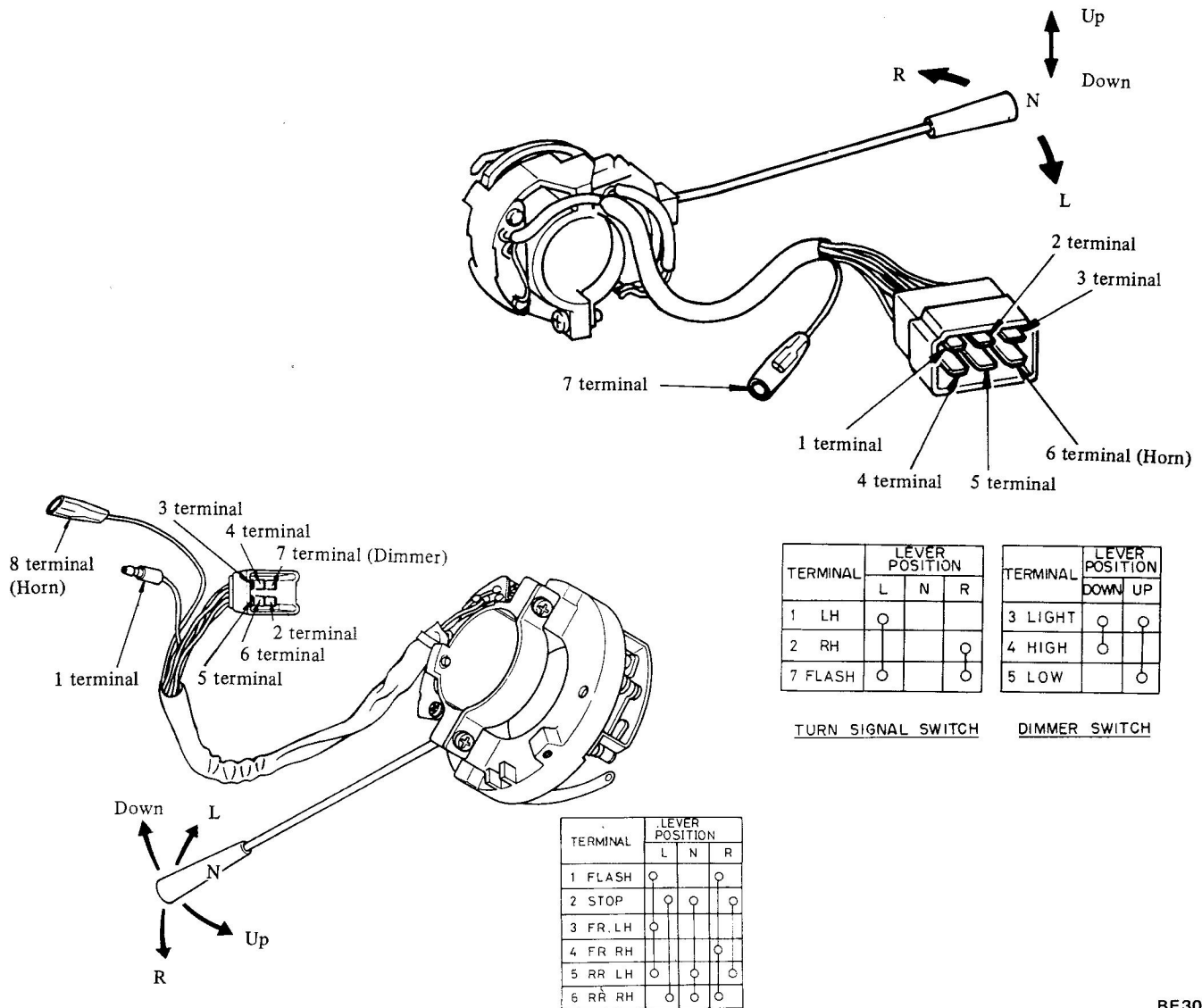
10. Clip wiring assembly at lower instrument panel.
11. Install steering wheel.

Inspection

Continuity test

Test continuity through lighting switch by using test lamp or ohmmeter.

BODY ELECTRICAL SYSTEM



BE307

Fig. BE-14 Turn signal and dimmer switch

STOP LAMP SWITCH

Removal and installation

Stop lamp switch is mounted at the bottom of (pedal and steering post) bracket.

1. Disconnect battery ground cable.
2. Disconnect lead wires at connectors.
3. Loosen lock nut, unscrew switch assembly and remove switch assembly.
4. Install switch assembly as described under "Brake pedal" in Section "BR."

Inspection

Continuity test

When plunger is pressed into switch assembly (when brake pedal is released), stop lamp switch contacts are open. On the contrary, contacts are closed with plunger projected.

DOOR SWITCH

Door switch can be replaced by pulling switch assembly out of lower pillar, withdrawing switch and wiring assembly and disconnecting lead wire at connector. Prior to performing op-

erations of removal, be sure to disconnect battery ground cable.

HAZARD SWITCH

Removal and installation

1. Disconnect multiple connector and lead wire from instrument harness wiring.
2. Remove shell covers (Upper and lower).
3. Remove two screws attaching switch to lower shell cover and remove switch.

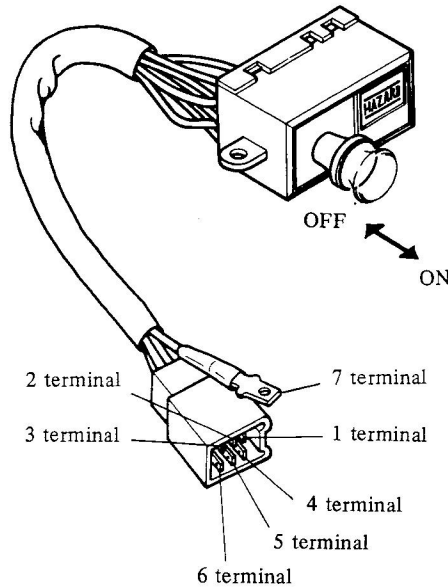
BODY ELECTRICAL SYSTEM

4. Install hazard switch in the reverse sequence of removal.

Inspection

Continuity test

Test continuity through hazard switch by using test lamp or ohmmeter.



TERMINAL	SWITCH POSITION	
	OFF	ON
1		○
2		○
3		○
4		○
5		○
6	○	
7	○	

BE308

Fig. BE-15 Hazard switch

BULB SPECIFICATIONS

Item		U.S.A. and Canada		General areas
		SAE trade number	Wattage (Candle power)	Wattage
Headlamp				
	Inner—High beam	4001	37.5	37.5
	Outer—Low - High beam	4002	37.5-50	37.5-50
Front combination lamp				
	Turn signal lamp	1034	8-23 (3-32)	21
	Parking lamp			5
Side flasher lamp		—	—	5
Side marker lamp		67	8 (4)	—
License plate illumination lamp		89	7.5 (6)	10
Rear combination lamp				
Pick-up	Turn signal <i>Front</i>	—	—	21
	Turn signal and stop	1073	23 (32)	—
	Tail/Stop	—	—	5-21
	Tail/Turn signal and stop	1034	8-23 (3-32)	—
	Tail	67	8 (4)	5
Double Pick-up	Back-up	1073	23 (32)	21
	Turn signal <i>rear</i>	—	—	21
	Tail/Stop	—	—	5-21
Room lamp		—	5	5
Engine room lamp		—	6	6
Wiper/washer illumination lamp		158	3.4 (2)	—
Heater control illumination lamp		57	3.4 (2)	—

Instrument panel

RSW

BODY ELECTRICAL SYSTEM

TROUBLE DIAGNOSES AND CORRECTIONS

Headlamp

Condition	Probable cause	Corrective action
Headlamps do not light for both high and low beams.	Burnt fuse. Loose connection or open circuit. Defective lighting switch. Defective dimmer switch Defective light relay. No ground.	Correct cause and replace fuse. Check wiring and/or repair connection. Conduct continuity test and replace if necessary. Check light relay for proper operation and replace if necessary. Clean and tighten ground terminal.
High beam cannot be switched to low beam or vice versa.	Defective dimmer switch. Defective light relay.	Conduct continuity test and replace if necessary. Check light relay for proper operation and replace if necessary.
Headlamps dim.	Partly discharged or defective battery. Defective charging system. Poor ground or loose connection. Burnt sealed beams.	Measure specific gravity of electrolyte and recharge or replace battery if necessary. Measure voltage at headlamp terminals. If it is less than 12.8V, check charging system for proper operation. Clean and/or tighten. Replace.
Headlamp in only one side lights.	Loose headlamp connection. Defective sealed beam.	Repair. Replace.

Turn signal lamp

Condition	Probable cause	Corrective action
Turn signals do not operate.	Burnt fuse. Loose connection or open circuit. Defective flasher unit. Defective turn signal switch.	Correct cause and replace. Check wiring and/or repair connection. Replace. Conduct continuity test and replace if necessary.
Flashing cycle is too slow. (Pilot lamp does not go out.) or too fast.	Bulbs having wattage other than specified wattage are used. Burnt bulbs. Loose connection. Defective flasher unit.	Replace with specified one. Replace. Repair. Replace.
Flashing cycle is irregular.	Burnt bulb. Loose connection. Bulb having wattage other than specified wattage is used.	Replace. Repair. Replace with specified one.

BODY ELECTRICAL SYSTEM

Tail lamp, stop lamp and back-up lamp

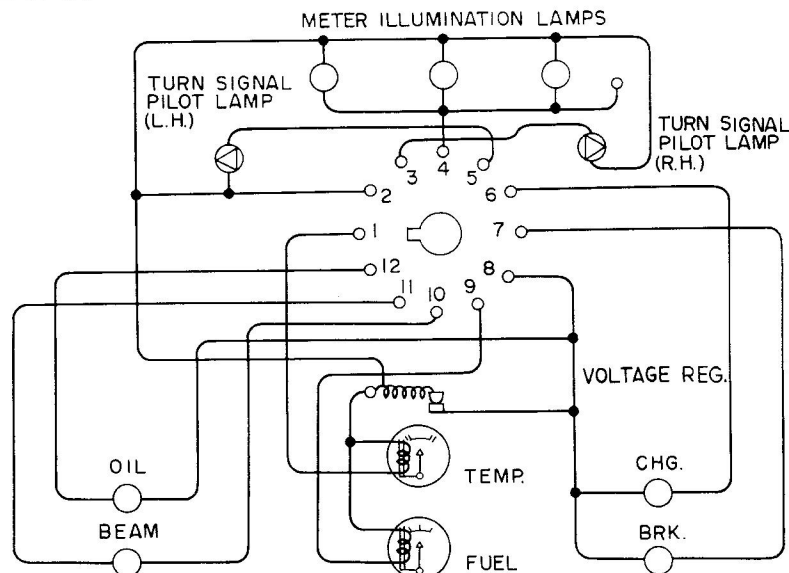
Condition	Probable cause	Corrective action
Both left and right lamps do not light.	Burnt fuse.	Correct cause and replace.
	Defective stop lamp switch.	Conduct continuity test and replace if necessary.
	Defective back-up lamp switch.	Conduct continuity test and replace if necessary.
	Loose connection or open circuit.	Check wiring and/or repair connection.
Lamp in only one side lights.	Burnt bulb.	Replace.
	Loose bulb.	Repair lamp socket.

METER AND GAUGES

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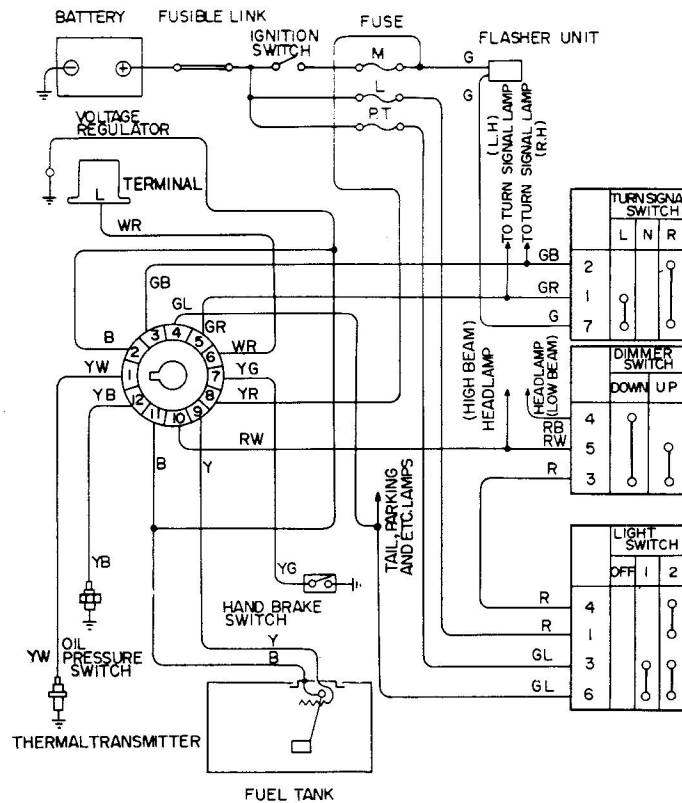
COMBINATION METER



BE309

Fig. BE-16 Circuit diagram for combination meter

BODY ELECTRICAL SYSTEM



BE310

Fig. BE-17 Circuit diagram for combination meter system (General areas)

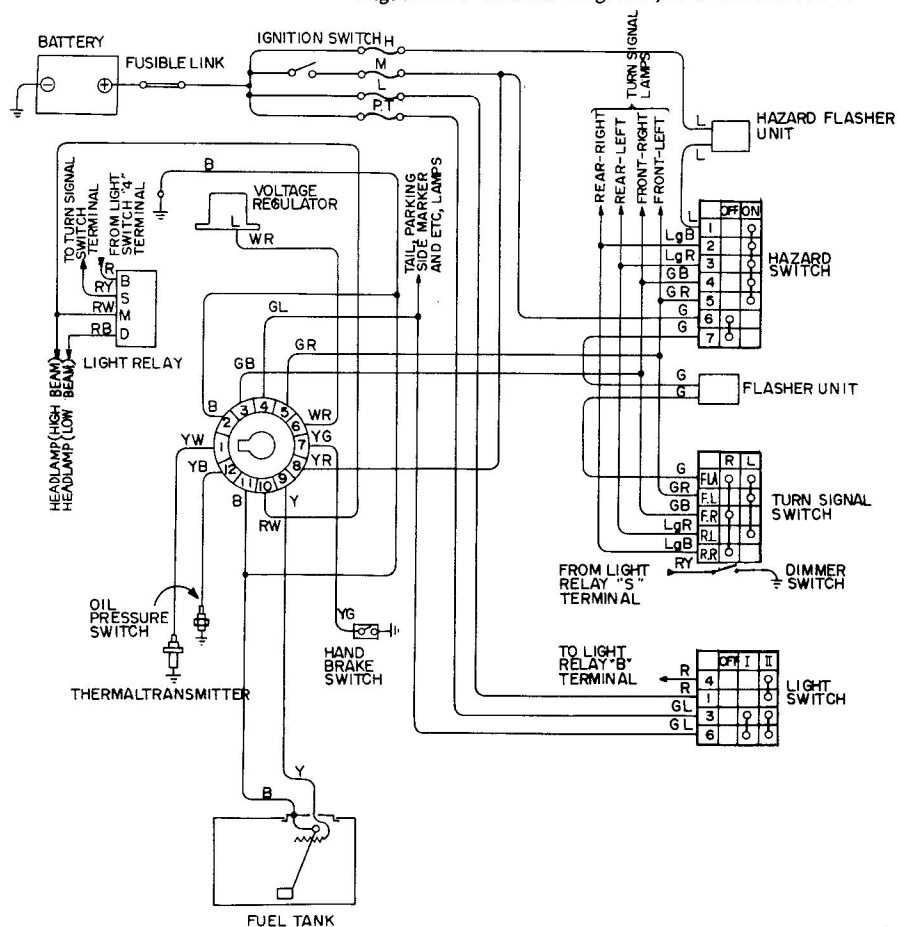


Fig. BE-18 Circuit diagram for combination meter system (U.S.A. and Canada)

Removal and installation

L.H. drive vehicle

1. Disconnect battery ground cable.
2. Working through meter openings of cluster lid, remove three screws retaining cluster lid to instrument panel.
3. From underneath instrument panel, remove one screw retaining meter assembly to lower panel of instrument.
4. Withdraw cluster lid slightly. For access to switches, knobs, etc., follow the procedures given in each section.
5. From behind combination meter disconnect speedometer cable at speedometer head and multiple connector (instrument wire assembly) from printed circuit.
6. On vehicle with clock, disconnect wires at each connection on meter printed circuit.
7. Remove four screws retaining meter assembly to cluster lid.
8. Remove combination meter assembly.
9. When installing combination meter assembly, follow the reverse sequence of removal.

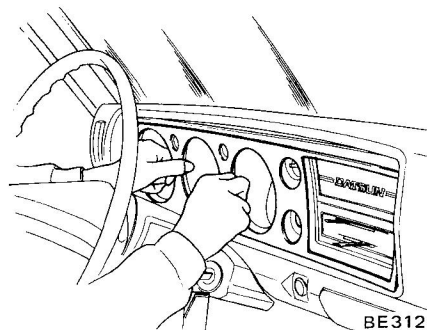


Fig. BE-19 Removing cluster lid

R.H. drive vehicle

1. Disconnect battery ground cable.
2. From behind combination meter assembly, disconnect speedometer cable at speedometer head and multiple connector (instrument wire assembly) from printed circuit.
3. On vehicle with clock, disconnect two wires at each connection on meter printed circuit.

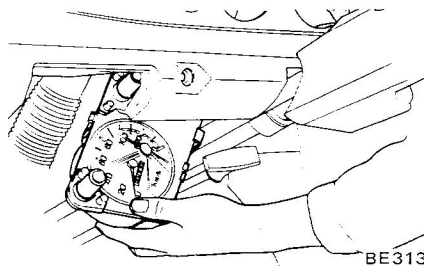


Fig. BE-20 Removing combination meter

4. Working through meter (center and right) openings of instrument panel, remove two screws retaining combination meter assembly to instrument panel.
5. From underneath instrument panel, remove one screw retaining meter assembly to lower instrument panel.
6. Dismount combination meter assembly as shown in Figure BE-20.
7. When installing combination meter assembly, follow the reverse sequence of removal.

SPEEDOMETER

Removal and installation

1. Remove combination meter assembly. Follow the procedures under "Removal and installation" in "COMBINATION METER."
2. Remove meter front cover and shadow plate by removing clips and screws.
3. Remove screws retaining speedometer to printed circuit housing and remove speedometer.
4. Install speedometer in the reverse sequence of removal.

FUEL METER AND WATER TEMPERATURE METER

Description

The fuel meter consists of a tank

unit located in the fuel tank and fuel meter. The tank unit detects fuel level with its float, converts fuel level variation to a resistance of slide resistor installed on the float base, and thus, controls current flowing to the fuel meter.

The water temperature meter consists of a meter and thermaltransmitter located in the engine block. The thermaltransmitter is equipped with a thermistor element which converts cooling water temperature variation to a resistance, and thus, the thermaltransmitter controls current flowing to the meter.

The fuel meter and water temperature meter are provided with a bimetal arm and heater coil. When the ignition switch is set to "ON," current flows to the heat coil, and the heat coils is heated. With this heat, the bimetal arm is bent, and thus, the pointer connected to the bimetal arm is operated. The characteristics of both meters are the same.

A tolerance may occur on the water temperature meter or fuel meter due to source voltage fluctuation. The voltage regulator is used to supply a constant voltage so that the water temperature meter and fuel meter operate correctly.

The operating part of the regulator consists of a bimetal arm and a heater coil. When the ignition switch is turned on, the bimetal arm is heated and bent by the coil, opening the contact. Consequently, current to the coil is interrupted. As the bimetal cools, the contact closes. The repetition of this operation produces a pulsating voltage of 8 volts which is applied to the temperature and fuel gauges.

If both the water temperature meter and fuel meter become defective at the same time. This may be attributable to trouble in the voltage regulator.

BODY ELECTRICAL SYSTEM

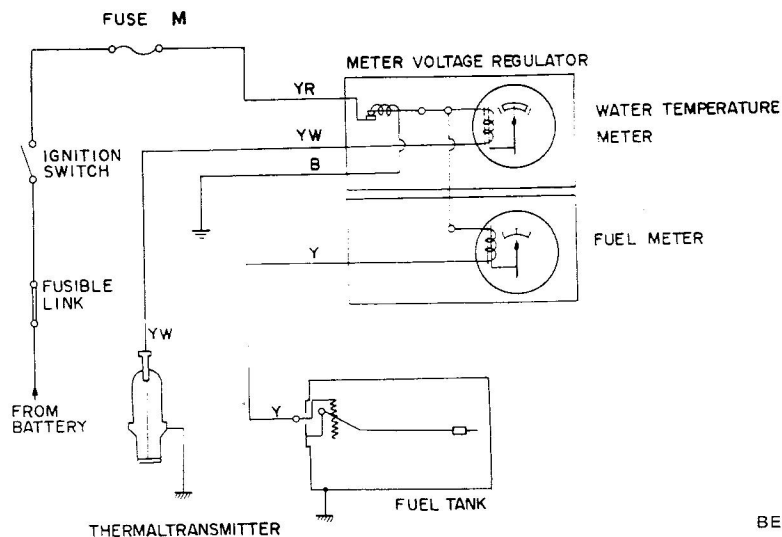


Fig. BE-21 Circuit diagram for fuel meter and water temperature meter

Removal and installation

1. Remove combination meter assembly. Follow the procedures under "Removal and installation" in "COMBINATION METER."
2. Remove meter front cover and shadow plate by removing clips and screws.
3. Remove retaining nuts at the back side of combination meter assembly and remove meter.
4. Install meter in the reverse sequence of removal.

OIL PRESSURE WARNING LAMP

Description

The engine lubricating system incorporates an oil pressure warning lamp which glows whenever engine oil pressure falls below 0.4 to 0.6 kg/cm² (5.7 to 8.5 psi). Under normal operation, when the engine is stationary, the light glows with the ignition switch turned on. When the engine is running and oil pressure reaches the above range, the circuit opens and the light goes out.

Oil pressure switch

To replace oil pressure switch, disconnect lead wire from switch terminal and unscrew switch from engine cylinder block.

Prior to installing switch to cylinder block, be sure to apply conductive sealer to threads of new switch.

CHARGE WARNING LAMP

Description

The charge warning lamp glows when the ignition switch is set to "ON" with the engine shut down, or when the generator falls to charge with the engine operated.

When the ignition switch is set to "ON," the charge warning circuit is closed and current flows from the ignition switch to the warning lamp and grounds through the regulator (Fig. BE-23-1). When the engine is started and the generator comes into operation, the generator output current (N) opposes the current flowing from the warning lamp; as the current (N) increases, the solenoid is more energized and the pilot lamp relay contacts are open, in effect it breaks the warning circuit ground connection, and the lamp goes out (Fig. BE-23-2).

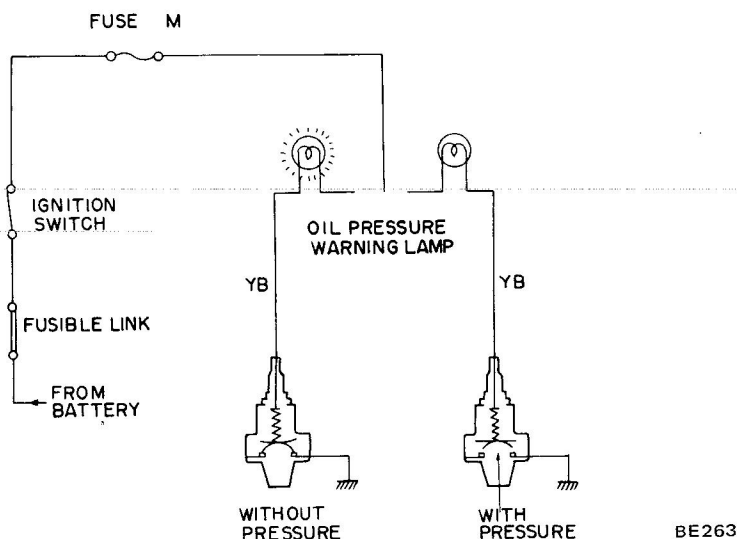


Fig. BE-22 Circuit of oil pressure warning system

BODY ELECTRICAL SYSTEM

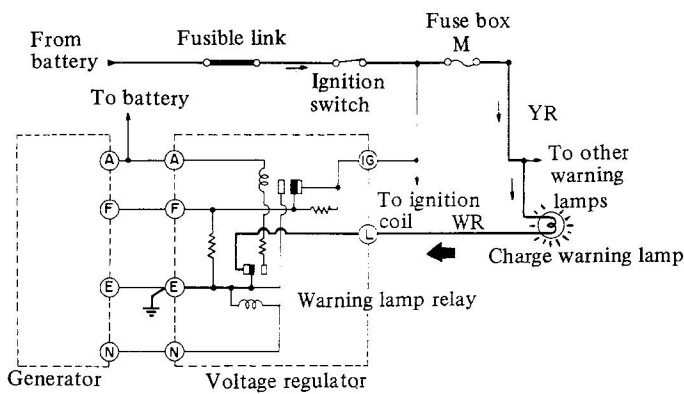
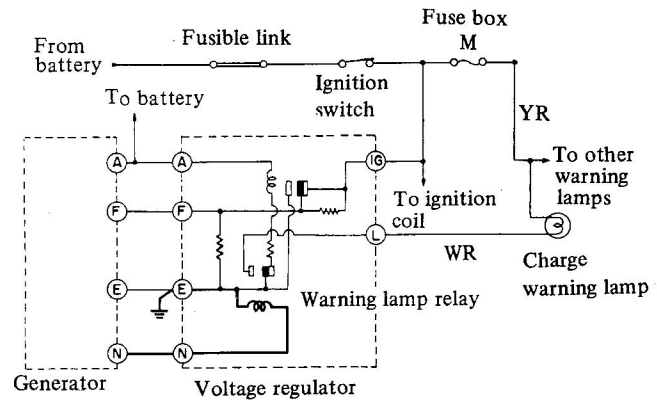


Fig. BE-23-1

Circuit of charge warning system



BE264

Fig. BE-23-2

HAND BRAKE WARNING LAMP

Description

The hand brake warning lamp glows when the hand brake is applied.

When the ignition switch is set to "ON," current flows from the ignition switch to the warning lamp. When the hand brake is applied, hand brake warning switch is closed and warning lamp glows.

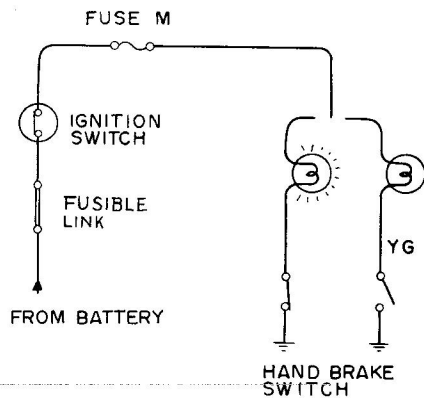
Hand brake switch

To remove hand brake switch, disconnect lead wire, pull switch out of hand brake control bracket and withdraw switch and wiring assembly.

METER ILLUMINATION, INDICATOR AND WARNING BULBS

Removal and installation

To replace bulb, turn bulb socket counterclockwise to dismount it from combination meter (if necessary, disconnect lead wire connector from printed circuit) and remove bulb from socket.



BE314

Fig. BE-24 Circuit for hand brake warning lamp

Bulb specifications

Item	SAE Trade Bulb No.	Wattage (Candle power) W (C)
Meter illumination lamp	161	1.7 (1)
Turn signal indicator lamp	161	1.7 (1)
High beam indicator lamp	161	1.7 (1)
Oil pressure warning lamp	161	1.7 (1)
Charge warning lamp	161	1.7 (1)
Hand brake warning lamp	161	1.7 (1)
Clock illumination lamp	161	(1.7) (1)

BODY ELECTRICAL SYSTEM

TROUBLE DIAGNOSES AND CORRECTIONS

Speedometer

Condition	Probable cause	Corrective action
Speedometer pointer and odometer do not operate.	Loose speedometer cable union nut. Broken speedometer cable. Damaged speedometer drive pinion gear (Transmission side). Defective speedometer.	Retighten. Replace. Replace. Replace.
Unstable speedometer pointer.	Improperly tightened or loose speedometer cable union nut. Defective speedometer cable. Defective speedometer.	Retighten. Replace. Replace.
Unusual sound occurs in response to increase of driving speed.	Excessively bent or twisted speedometer cable inner wire or lack of lubrication. Defective speedometer.	Replace or lubricate. Replace.
Inaccurate speedometer indication.	Defective speedometer.	Replace.
Inaccurate odometer operation.	Improperly meshed second and third gear worn gears. Faulty feeding due to deformed odometer and pinion carrier.	Replace speedometer. Replace speedometer.

BODY ELECTRICAL SYSTEM

Water temperature and fuel meters

Condition	Probable cause	Corrective action
Both water temperature meter and fuel meter do not operate.	Burnt fuse. Defective meter voltage regulator.	Correct cause and replace fuse. Replace water temperature meter.
Both water temperature meter and fuel meter indicate inaccurately.	Defective meter voltage regulator (Meter pointer fluctuates excessively). Loose or poor connection (Meter pointer fluctuates slightly).	Replace water temperature meter. Correct connector contact.
Water temperature meter Water temperature meter does not operate.	Defective thermaltransmitter or loose terminal connection. (When thermaltransmitter yellow/white wire is grounded, meter pointer fluctuates). Defective water temperature meter. Open circuit.	Replace thermaltransmitter or correct terminal connection. Replace water temperature meter.
Meter indicates only maximum temperature.	Defective thermaltransmitter (Meter pointer returns to original position when ignition switch is turned off). Defective water temperature meter. (Meter pointer indicates maximum temperature even after ignition switch is turned off).	Replace thermaltransmitter. Replace water temperature meter.
Water temperature meter does not operate accurately.	Defective water temperature meter. Defective thermaltransmitter. Loose or poor connection.	[Connect a 115Ω resistance between thermaltransmitter yellow/white wire and ground. When meter indicates approximately 50°C (122°F), meter is serviceable]. Correct connector terminal contact.
Fuel meter Fuel meter does not operate.	Defective tank unit or loose unit terminal connection. (Pointer deflects when tank unit yellow wire is grounded.) Defective fuel meter. Open circuit.	Replace tank unit or correct terminal connection. Replace fuel meter.
Pointer indicates only "F" position.	Defective tank unit. (Pointer lowers below "E" mark when ignition switch is turned off.) Defective fuel meter. (Pointer still indicates "F" position when ignition switch is turned off.)	Replace tank unit. Replace fuel meter.

BODY ELECTRICAL SYSTEM

Condition	Probable cause	Corrective action
Fuel meter does not operate accurately.	Defective tank unit. (Pointer indicates a half level when a 35Ω resistance is connected between tank unit yellow wire and ground.) Defective fuel meter. Poor or loose connection.	Replace tank unit. Replace fuel meter. Correct connector terminal contact.

Oil pressure and charge warning lamps

Condition	Probable cause	Corrective action
Oil pressure warning lamp Lamp does not light when ignition switch is set to "ON."	Defective oil pressure switch or loose switch terminal connection. (When switch yellow/black wire is grounded, warning lamp lights.) Burnt bulb or loose bulb. Open circuit.	Replace switch or correct terminal connection. Replace bulb or correct bulb socket.
Lamp does not go out while engine is being operated.	Lack of engine oil. Oil pressure too low. Defective oil pressure switch.	Check oil level and add oil as required. Inspect engine oil pressure system. Replace oil pressure switch.
Charge warning lamp Lamp does not light when ignition switch is set to "ON."	Burnt bulb or loose bulb. (Warning lamp does not light when voltage regulator white/red wire is grounded.) Open circuit.	Replace bulb or correct bulb socket.
Lamp does not go out when engine is started.	Faulty charging system.	Inspect charging system.

HORN

CONTENTS

DESCRIPTION	BE-21	Horn switch	BE-22
REMOVAL AND INSTALLATION	BE-22	ADJUSTMENT	BE-22
Horn	BE-22	TROUBLE DIAGNOSES AND	
Horn relay	BE-22	CORRECTIONS	BE-23

DESCRIPTION

The horn circuit includes a horn relay. Current from the battery flows through the fusible link and fuse to

the horn relay (terminal B), where it is shunted by the two circuits. In one circuit (terminal S), the current flow is

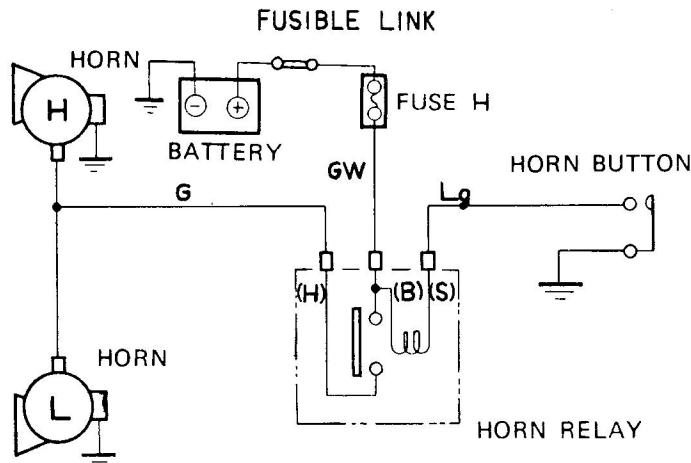
supplied through the solenoid and horn button to the ground. In the other circuit (terminal H), the current

BODY ELECTRICAL SYSTEM

flow is supplied through the relay contacts and horn. (Horn bracket serves as a grounding.)

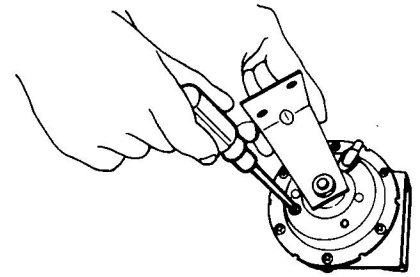
When the horn button is pressed,

current from the battery energizes the solenoid. As the solenoid is energized, the relay contacts are closed. This allows the current to flow to the horn.



BE015

Fig. BE-25 Circuit diagram for horn system



BE315

Fig. BE-26 Adjusting horn sound

Sound	Consumed current at 12 volts (Amperes)
Low pitch (330Hz)	3A to 5A
High pitch (415Hz)	3A to 5A

REMOVAL AND INSTALLATION

Horn

Disconnect horn wire at terminal on horn body and remove retaining bolts that hold bracket and horn assembly to hood ledge. Install horn and bracket assembly in reverse sequence of removal.

Horn relay

Horn relay is mounted to radiator core support.

Disconnect battery ground cable. Disconnect three lead wires at terminals on horn relay and remove retaining screw.

Install horn relay in the reverse sequence of removal.

Horn switch

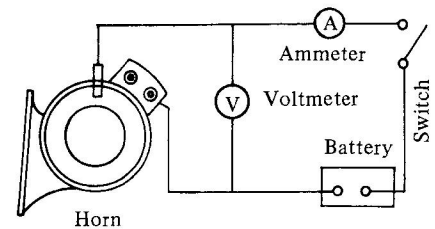
The horn switch is integral with the turn signal and dimmer switch assembly. Remove switch assembly as outlined in "TURN SIGNAL AND DIMMER SWITCH."

ADJUSTMENT

1. Secure horn in a vise. Using a voltmeter, battery and ammeter, connect horn as shown in Figure BE-27.
2. Set switch to "ON," and make sure that voltmeter indicates between 12 and 12.5 volts.
3. Listening horn for sound level, volume and tone, adjust ammeter reading to consumed current of at or below specifications. Make sure that horn sounds clear.

Notes:

- a. Adjustment is made by turning adjusting screw, after loosening lock nut.
- b. When adjusting screw is turned;
 - clockwise: Current increases
 - counterclockwise: Current decreases



BE117

Fig. BE-27 Circuit for horn adjustment

4. After tone adjustment has been made as outlined above, check sound again at an alternator voltage (14 to 15 volts). If sound is clear through this check, then tighten lock nut securely.

BODY ELECTRICAL SYSTEM

TROUBLE DIAGNOSES AND CORRECTIONS

Condition	Probable cause	Corrective action
Horn does not operate.	Discharged battery. (Measure specific gravity of electrolyte.) Burnt fuse. Faulty horn button contact. (Horn sounds when horn relay terminal(s) is grounded.) Defective horn relay. (Horn sounds when (B) and (H) horn relay terminals are connected with a test lead). Defective horn or loose horn terminal connection.	Recharge or replace battery. Correct cause and replace fuse. Repair horn button. Replace horn relay. Correct horn terminal connection or replace horn.
Horn sounds continuously.	Short-circuited horn button and/or horn button lead wire. (When light green lead wire is disconnected from horn relay terminal(s), horn stops to sound.) Defective horn relay.	Repair horn button or its wiring. Replace horn relay.
Reduced volume and/or tone quality.	Loose or poor connector contact. (Fuse, relay, horn and/or horn button) Defective horn.	Repair. Replace.

IGNITION SWITCH AND STEERING LOCK

CONTENTS

REMOVAL AND INSTALLATION	BE-23	Steering lock replacement	BE-24
Standard ignition switch	BE-23	INSPECTION	BE-24
Optional ignition switch with steering lock	BE-24		

REMOVAL AND INSTALLATION

Standard ignition switch

1. Disconnect battery ground cable from battery.
2. Unscrew and remove escutcheon from the front of ignition switch.
3. Withdraw ignition switch and wiring assembly (with spacer), from shell cover as shown in Figure BE-28.

4. Disconnect wiring connector from the back of ignition switch.
5. Replace ignition switch with new one.
6. Connect ignition switch to wiring connector.
7. Position ignition switch to shell cover opening, install and tighten escutcheon and secure ignition switch to shell cover.

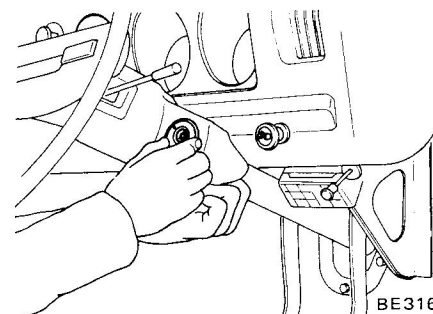


Fig. BE-28 Removing ignition switch

BODY ELECTRICAL SYSTEM

Optional ignition switch with steering lock

The ignition switch is interchangeable and built-in the steering lock.

To remove ignition switch from steering lock, remove two retaining screws and remove switch assembly from the back of steering lock cylinder (Figure BE-29).

Steering lock replacement

For the purpose of tamper-proof, the self-shear type screws are used, and their heads are sheared off when installed so that the steering lock system cannot be removed easily. Replace the steering lock in accordance with the following instructions.

Break two self-shear type screws with a drill or other proper tool. Remove two screws and dismount the

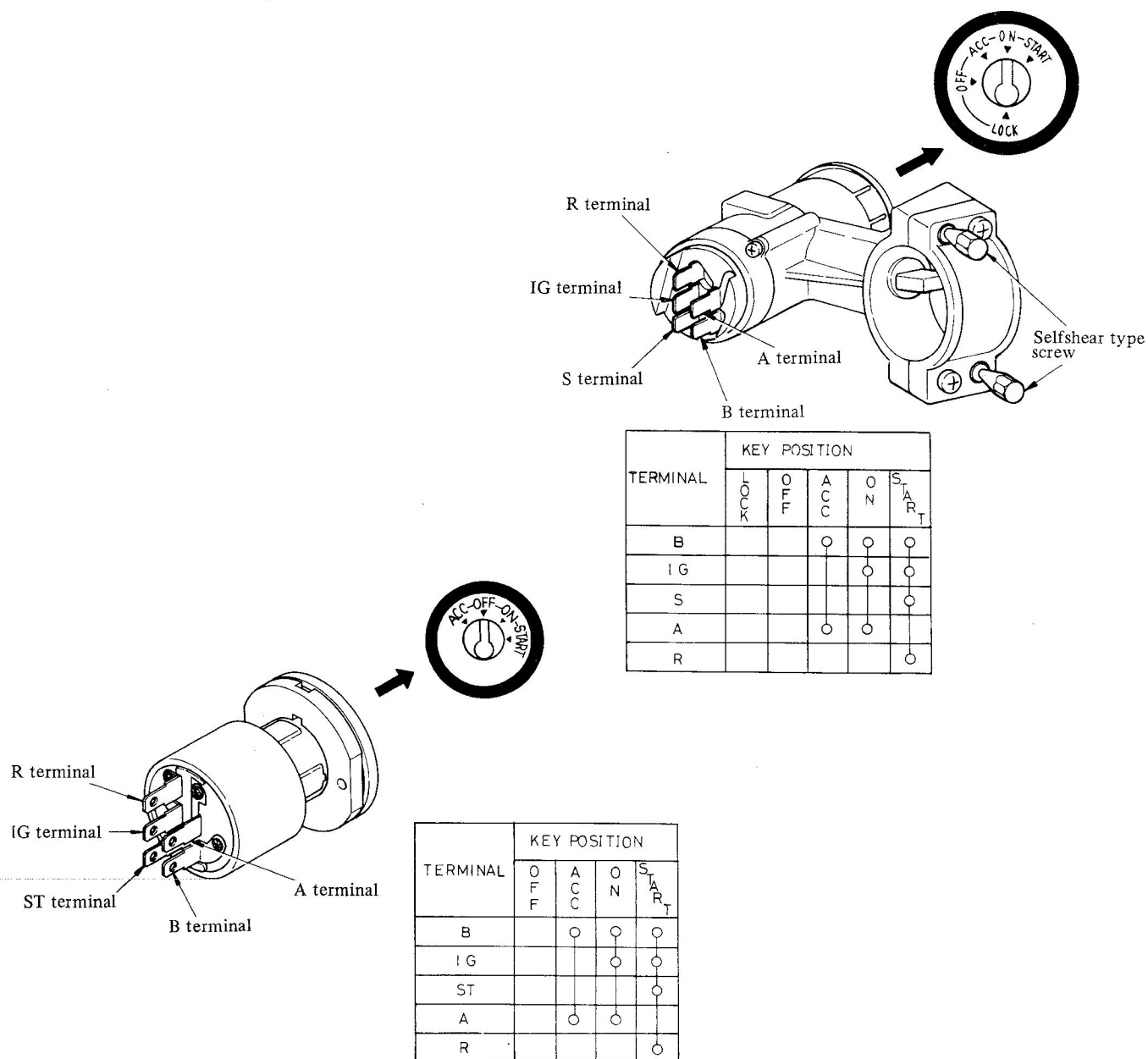
steering lock from the steering jacket tube.

When installing a new steering lock, be sure to tighten two new self-shear type screws to shear off their heads.

INSPECTION

Continuity test

Test continuity through ignition switch by using test lamp or ohmmeter.



BE317

Fig. BE-29 Ignition switch

WINDSHIELD WIPER AND WASHER

CONTENTS

REMOVAL AND INSTALLATION	BE-25	INSPECTION	BE-26
Wiper linkage	BE-25	Wiper motor	BE-26
Wiper motor	BE-25	Wiper and washer switch	BE-26
Wiper and washer switch	BE-25	TROUBLE DIAGNOSES AND	
Washer pump	BE-25	CORRECTIONS	BE-27
Washer nozzle	BE-25		

REMOVAL AND INSTALLATION

Wiper linkage

1. Remove wiper blade and arm assembly from pivot.
2. Remove cowl top grille. See section "BF."
3. Remove two flange nuts retaining pivot (wiper linkage) to cowl top.
4. Remove stop ring that retains connecting rod to wiper motor arm.
5. Remove wiper motor linkage assembly.
6. Install wiper motor linkage in the reverse sequence of removal.

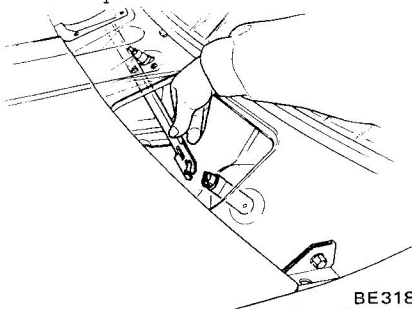


Fig. BE-30 Removing wiper linkage

7. Install wiper arm and blade assembly in correct sweeping angle. See Figure BE-31 for correct installing dimensions.

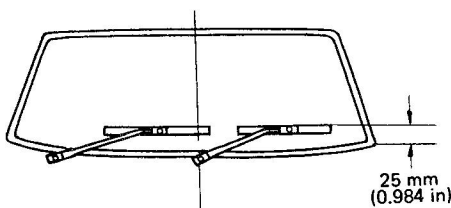


Fig. BE-31 Wiper arm installation

Wiper motor

1. Remove cowl top grille.
3. Remove stop ring that connects wiper motor arm to connecting rod.
3. From under instrument panel, disconnect wiper motor harness at connector on wiper motor body.
4. Remove three retaining screws and pull out wiper motor forward.
5. Install wiper motor in the reverse sequence of removal.

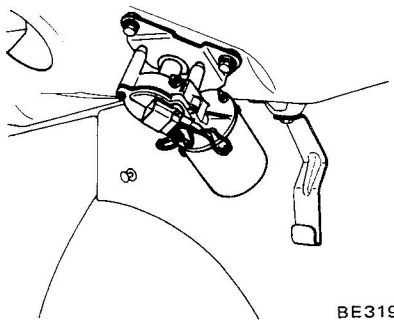


Fig. BE-32 Removing wiper motor

Wiper and washer switch

1. Press in switch knob, turn it counterclockwise and pull it out of switch.
2. Unscrew escutcheon and remove escutcheon and spacer.
3. Reach up from underneath instrument panel, disconnect wiper switch multiple connector from instrument harness wiring assembly and remove spacer and switch.
4. Install new switch in the reverse sequence of removal.

Washer pump

The washer pump and washer fluid tank are integral parts and are serviced as an assembly.

Caution for windshield washer operation

1. Be sure to use only washing solution.

Never use mix powder soap or detergent with solution.

2. Do not operate windshield washer continuously more than 30 seconds or without washer fluid. This often causes improper windshield washer operation. Normally, windshield washer should be operated 10 seconds or less at one time.

1. Disconnect two washer pump lead wires at connectors.
2. Remove hose from washer pump and drain washer fluid.
3. Pull out washer tank and motor assembly from tank bracket.
4. Install washer tank and motor assembly in the reverse sequence of removal.

Washer nozzle

Access for washer nozzle removal is obtained by disconnecting vinyl tube and removing washer nozzle retaining screw from cowl top.

When washer nozzle is installed or when washer fluid is not sprayed properly, adjust nozzle direction by bending nozzle tube so that washer fluid is sprayed in range indicated in Figure BE-33.

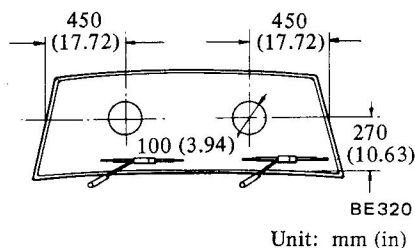
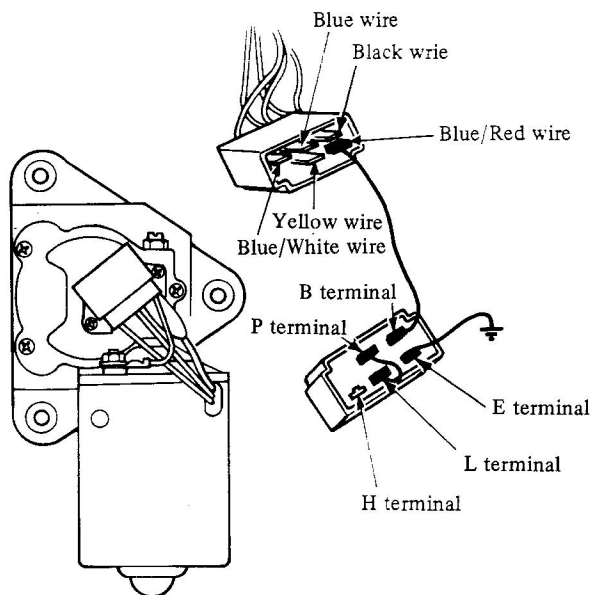


Fig. BE-33 Washer nozzle adjustment

INSPECTION

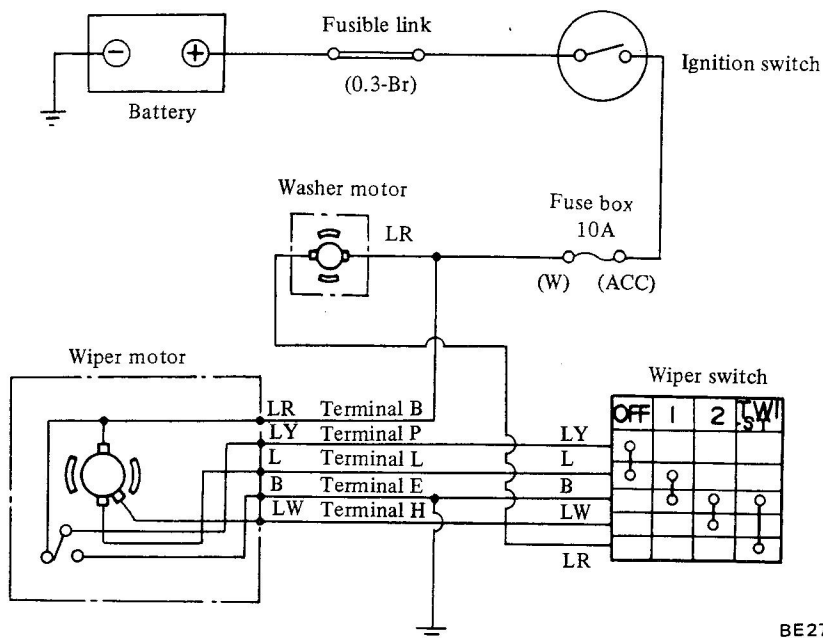
Wiper motor

1. Disconnect wiring connector from wiper motor.
2. Connect test lead between B terminal on motor side and battery positive terminal (or B terminal and blue/red wire terminal in wiring connector plug).
3. To check wiper low speed operation, connect L terminal to ground with ground cable (or connect L terminal to black wire terminal), make sure that wipers sweep at low speed.
4. To check wiper high speed operation, connect ground cable to H terminal in the same manner as in step 3; make sure that wipers sweep fast.
5. During low speed operation, connect E terminal to ground and connect P terminal and L terminal with lead wire as shown in Figure BE-34. At this time, make sure that auto-stop mechanism actuates to stop wiper blade at the specified position.
6. Wiper is in good condition if above tests are made as indicated.



BE321

Fig. BE-34 Wiper motor



BE271

Fig. BE-35 Circuit diagram for windshield wiper-washer system

Wiper and washer switch

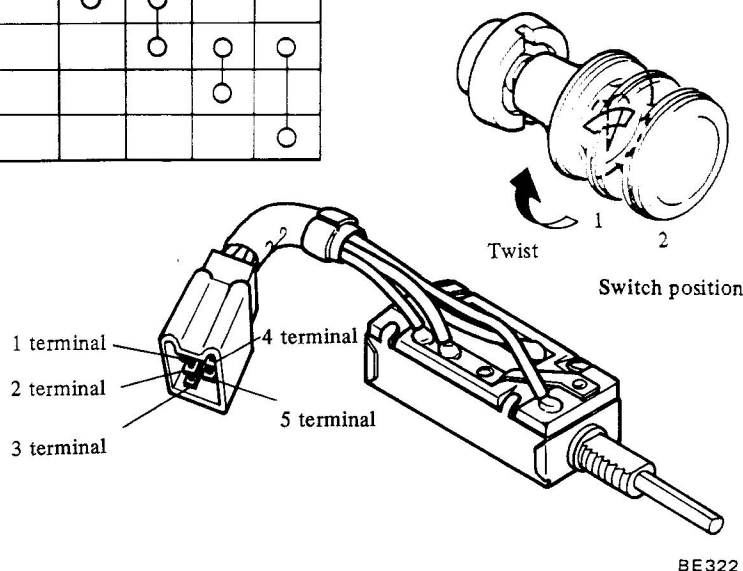
Continuity test

Remove wiper switch from vehicle as outlined in "Wiper switch."

Test continuity through wiper switch by using test lamp or ohmmeter.

BODY ELECTRICAL SYSTEM

TERMINAL	SWITCH POSITION			
	OFF	1	2	TWIST
1				
2				
3				
4				
5				



BE322

Fig. BE-36 Wiper switch

TROUBLE DIAGNOSES AND CORRECTIONS

Condition	Probable cause	Corrective action
Windshield wiper motor does not operate.	Burnt fuse. Defective motor. (Check wiper motor as outlined in "INSPECTION.") Loose connection. Defective wiper and washer switch. (Test continuity through switch as outlined in "INSPECTION.") Open power circuit or ground circuit.	Correct cause and replace fuse. Replace wiper motor. Repair. Replace. Repair.
Wiper operating speed is too slow.	Defective motor. Loose or poor connection. Seized or rusted wiper linkage. (Humming occurs on motor in wiper blade operating cycle.) Wiper blades stick on windshield glass. (Raise arm and operate wiper without load.)	Replace motor. Repair. Lubricate or replace. Clean windshield glass and/or replace wiper blade.
Wiper speed cannot be changed correctly.	Defective wiper switch. Defective motor.	Replace. Replace.

BODY ELECTRICAL SYSTEM

Condition	Probable cause	Corrective action
Wiper motor continues to run after switch is turned off or wiper blades do not return to correct position.	Faulty auto-stop operation.	Remove auto-stop device cover, and check relay contacts. Clean dirty contacts or repair relay plate bending if necessary.
	Poor connection.	Repair.
	Defective switch.	Replace.

RADIO

CONTENTS

REMOVAL AND INSTALLATION	BE-28	Antenna trimmer	BE-29
Radio	BE-28	TRUBLE DIAGNOSES AND	
Antenna and antenna cable	BE-28	CORRECTIONS	BE-29
ADJUSTMENT	BE-29	Noise prevention chart	BE-29

REMOVAL AND INSTALLATION

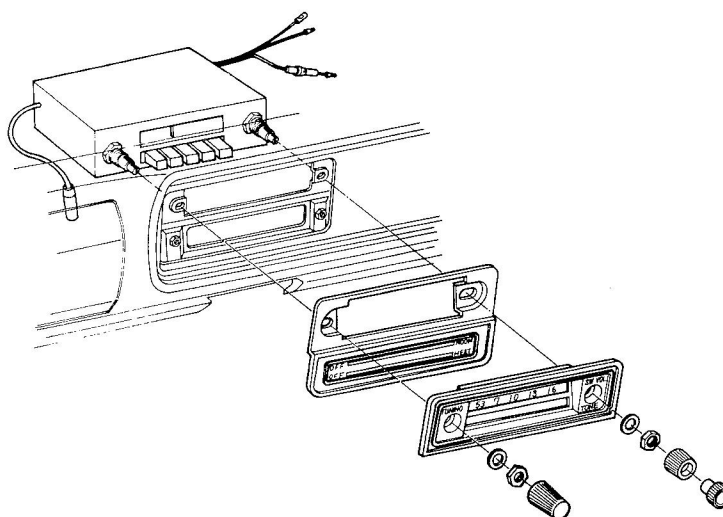
Radio

Removal

1. Pull radio knobs off radio control shafts.
2. Remove radio holding nuts and washer from radio control shafts.
3. Remove radio bezel from the front of radio.
4. From under instrument panel, disconnect antenna cable and lead wires (power lead and speaker lead).
5. Remove radio from instrument panel.

Installation

1. From behind instrument panel position radio to instrument panel.
2. Install radio bezel to the front of radio.
3. Install washers and nuts on radio control shafts and tighten them securely. Then install control knobs.
4. Connect antenna cable and lead wires (power lead and speaker lead).



BE323

Fig. BE-37 Radio

Antenna and antenna cable

Removal

1. From behind instrument panel disconnect antenna cable at connector.

2. Remove plug on antenna base and remove antenna base retaining screw.
3. Remove antenna and cable assembly from front pillar.
4. Unscrew antenna clip from front pillar if necessary.

BODY ELECTRICAL SYSTEM

Installation

1. Remove rubber plugs that cover antenna mounting opening in front pillar (when installing radio antenna to vehicle that is not equipped with radio).
2. Thread mounting stud of antenna clip into (upper) antenna mounting opening.
3. Insert antenna cable into (lower) antenna mounting opening and place antenna base in position.
4. Install antenna base retaining screw.
5. Route antenna cable along upper dash panel to radio.
5. Connect antenna cable at connector.

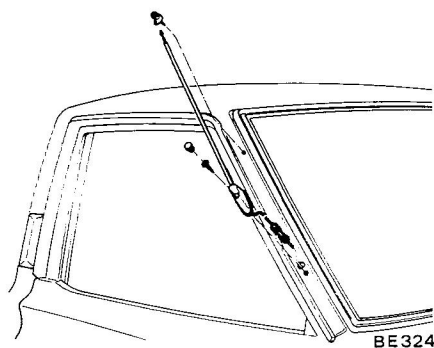


Fig. BE-38 Radio antenna

ADJUSTMENT

Antenna trimmer

When a new radio receiver, antenna or antenna feeder is installed, antenna trimmer should be adjusted.

1. Extend antenna completely.
2. Tune in the weakest station between 12 and 16 (1,200 to 1,600KC) on dial.

Noise may be generated but disregard it.

3. Turn antenna trimmer to left and right slowly and set it at a position where receiving sensitivity is highest.

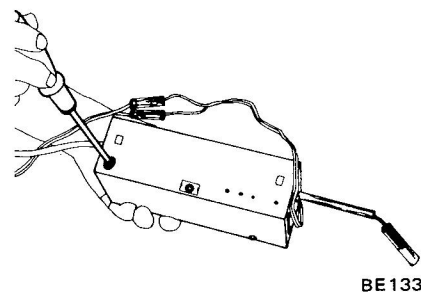


Fig. BE-39 Adjusting antenna trimmer

TROUBLE DIAGNOSES AND CORRECTIONS

Noise prevention chart

Position vehicle in an open area away from steel buildings, run engine, extend antenna to its maximum length, set volume control to maximum and set dial at a medium point without catching broadcasting wave.

Condition	Probable cause	Corrective action
Ignition system Noise occurs when engine is operated.	High tension cable.	Install new high tension cable.
	Ignition coil.	Install a 0.5 μ F capacitor to primary side + terminal of ignition coil. Note: Be careful not to install capacitor to secondary or primary breaker side, otherwise engine becomes improper.
	Distributor.	Install bond strap. Secure contact of carbon electric pole and rotor. Eliminate sharp tip on rotor pole or cap pole by scrubbing with a screwdriver. Check stagger between rotor and stator.

BODY ELECTRICAL SYSTEM

Condition	Probable cause	Corrective action
Charging system. Sound of alternating current presents.	Alternator.	Install a $0.5\mu\text{F}$ capacitor to charging terminal A. Note: Do not use a larger capacitor. If capacitor is installed to terminal F, alternator coil will be damage.
When accelerator pedal is depressed or released, noise presents.	Regulator.	Install a $0.5\mu\text{F}$ capacitor to "IGN" terminal of voltage regulator.
Supplement equipment When engine starts, noise presents. Noise still presents even after stopping engine.	Operative noise of water temperature and fuel meters.	Install $0.1\mu\text{F}$ capacitor between terminal and ground wire. Note: If a capacitor having a larger capacity is used, indication of meter will be deviated.

Notes:

a. Be sure to locate capacitor as close as to noise source and connect in parallel.

b. Cut lead wire as short as possible.
 c. Ground wire should be attached on the body completely.
 d. Make installation and connection

securely.

e. Carefully identify "+," "-", "IN" or "OUT" marks.

CLOCK

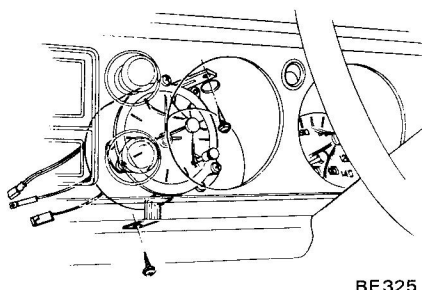
CONTENTS

REMOVAL	BE-30	INSTALLATION	BE-31
R.H. drive vehicle	BE-30	R.H. drive vehicle	BE-31
L.H. drive vehicle	BE-30	L.H. drive vehicle	BE-31

REMOVAL

R. H. drive vehicle

1. Remove battery ground cable.
2. Disconnect three wire connectors of clock, two from combination meter printed circuit, one from instrument harness wiring.
3. Remove one retaining screw from clock opening of instrument panel.
4. Remove one screw retaining clock to lower panel of instrument.
5. Remove clock from instrument panel.



BE325

Fig. BE-40 Removing clock

L. H. drive vehicle

1. Remove battery ground cable.
2. Remove cluster lid as per instruc-

tion in step 1 to 4 of "Removal" in "COMBINATION METER."

3. Disconnect three wire connectors of clock from combination meter printed circuit and instrument harness wiring.

4. Remove three screws and remove clock from cluster lid.

INSTALLATION

R. H. drive vehicle

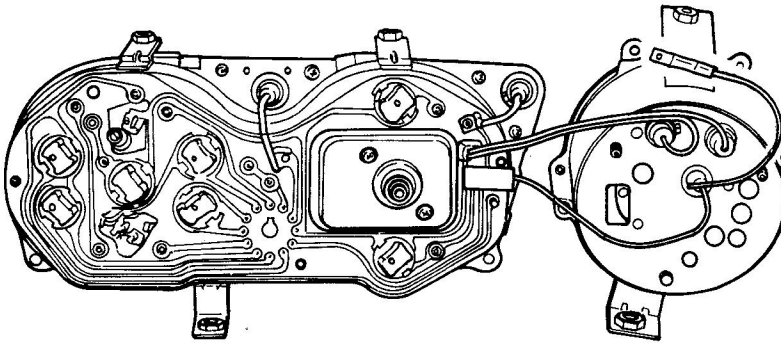
1. From behind instrument panel, position clock to instrument panel and install two retaining screws.

BODY ELECTRICAL SYSTEM

2. Connect three wire connectors of clock to each connection, two to combination meter printed circuit, one

to instrument harness wiring as shown in Figure BE-41.

3. Connect battery ground cable.



BE326

Fig. BE-41 Clock

L. H. drive vehicle

1. Position clock to cluster lid and install three screws.
2. Connect three wire connectors of clock to each connection, two to combination meter printed circuit, one to instrument harness wiring.
3. Install cluster lid to instrument panel.
4. Connect battery ground cable.

HEATER

CONTENTS

DESCRIPTION	BE-31	FAN MOTOR	BE-34
Air flow	BE-33	Removal and installation	BE-34
HEATER UNIT ASSEMBLY	BE-34	CONTROL ASSEMBLY	BE-34
Removal	BE-34	Removal and installation	BE-34
Installation	BE-34	ADJUSTMENT	BE-34
HEATER CORE	BE-34	SPECIFICATIONS	BE-35
Removal and installation	BE-34		

DESCRIPTION

Operation of the heater is controlled by two control levers located on the instrument panel and a hand operated knob on the center of the heater unit.

The AIR LEVER controls the air intake valve and/or room valve by its lever positions (OFF, DEFROST and ROOM) through the control cables. The air intake valve draws the fresh outside air from the cowl top grille and supplies the air into the heater unit. The room valve is located at the bottom of the heater unit. The air coming through the air intake valve opening is forced through the heater core to the room valve, where the air is distributed to the floor outlet and/or defroster outlets, depending on the position of the room valve.

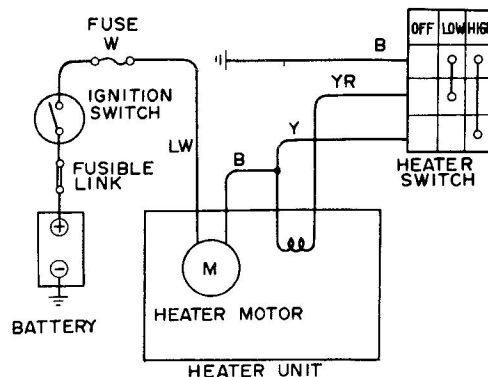
The VENT KNOB is directly linked to the vent valve which provides fresh air for the passenger. Push the knob all

the way in to open the valve. The fresh ventilating air comes out of the heater center outlet.

The TEMP LEVER is a dual purpose control; one is for regulating the flow of engine coolant flowing into the heater unit and the other is for the operation of the fan motor. When the lever is in the OFF position, the water cock is closed and the circulation of

engine coolant through the heater core stops. When the lever is slid to any other position than OFF, the water cock opens in proportion to the lever setting and allow engine coolant to flow into heater core.

To control the fan motor operation, push or pull the lever knob. Two speeds are provided for the fan motor by means of a three position switch.

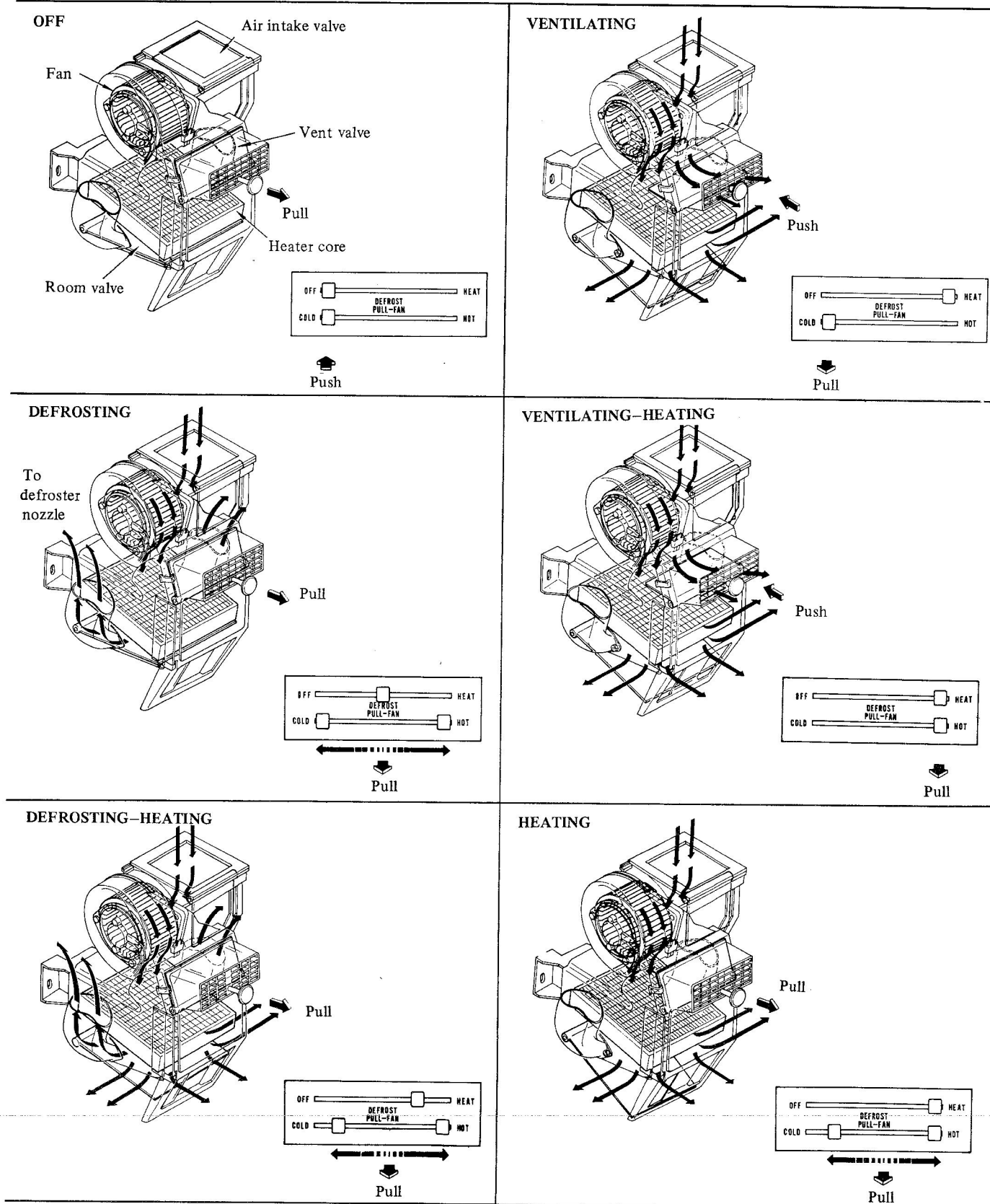


BE327

Fig. BE-42 Circuit diagram of heater

BODY ELECTRICAL SYSTEM

Air flow



BE397

Fig. BE-43 Air flow

HEATER UNIT ASSEMBLY

Removal

1. Disconnect battery ground cable.
2. Drain engine coolant.
3. Remove defroster hoses.
4. Remove three cable retaining clips and disconnect control cables from valves and water cock.
5. Disconnect two fan motor lead wires from each connector.
6. Disconnect two resistor lead wires from each connector.
7. Disconnect water hoses from core and water cock.
8. Remove three heater housing mounting bolts and dismount heater unit from vehicle.

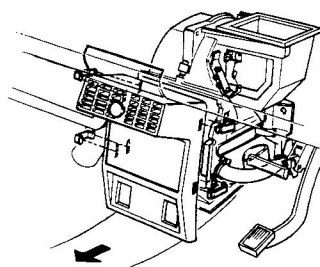
Installation

1. Position heater unit under instrument panel and install three heater unit securing bolts.
2. Install water hoses.
3. Position heater control cables to room valve, air intake valve and water cock.
4. Adjust control cable length for proper operation as outlined in "ADJUSTMENT."
5. Connect fan motor wires and resistance wires to each connector plug.
6. Install defroster hoses.
7. Connect battery ground cable.
8. Fill cooling system.
9. Run engine at 2,000 rpm with air lever in the "HEAT" position. Make sure that engine coolant is filled upto correct level.

HEATER CORE

Removal and installation

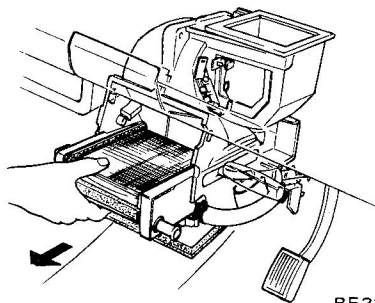
1. Drain engine coolant.
2. Remove defroster hoses.
3. Disconnect water hoses from inlet and outlet pipes of heater core.
4. Remove four clips and front cover.



BE329

Fig. BE-44 Removing front cover

5. Withdraw heater core from heater housing.



BE330

Fig. BE-45 Removing heater core

6. Install heater core in the reverse sequence of removal.

FAN MOTOR

Removal and installation

1. Dismount heater unit assembly from vehicle as outlined in "Removal" of "HEATER UNIT ASSEMBLY."
2. Remove nine spring clips and disassembly heater housing.
3. Remove fan from fan motor.
4. Remove fan motor retaining screws and fan motor.
5. Assembly heater housing and install heater unit to vehicle in the reverse sequence of removal as outlined in "Installation" of "HEATER UNIT ASSEMBLY."

CONTROL ASSEMBLY

Removal and installation

1. Remove three cable retaining

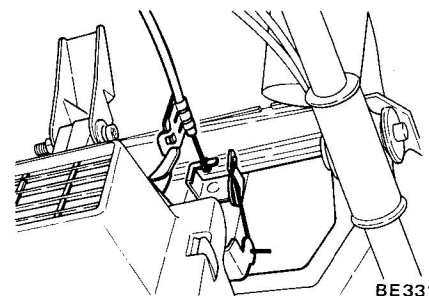
clips and disconnect control cables from valves and cock.

2. Disconnect three lead wires from each connector plug.
3. Remove radio bezel from the front of radio as per instructions in step 1 through 3 in "Removal" of "RADIO."
4. Remove heater control knobs and heater bezel.
5. Remove two retaining bolts and heater control assembly.
6. Install control assembly in the reverse sequence of removal. When connecting control cables to valves and cock, adjust control cable length as outlined in "ADJUSTMENT."

ADJUSTMENT

AIR lever

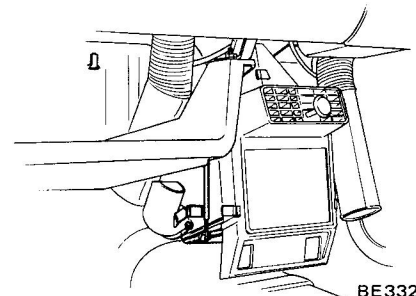
1. Move AIR lever to the "DEF" position.
2. Open air intake valve and connect control cable to air intake valve.
3. Clip control cable with cable retaining clip.



BE331

Fig. BE-46 Air intake valve

4. Pull room valve upward and connect control cable to room valve.
5. Clip control cable with cable retaining clip.



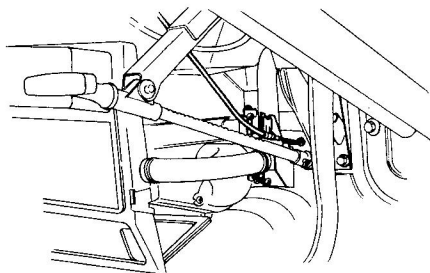
BE332

Fig. BE-47 Room valve

BODY ELECTRICAL SYSTEM

TEMP lever

1. Move TEMP lever to the "OFF" position.
2. Connect control cable to the lever of water cock when water cock lever is pulled forward (fully closed).
3. Install control cable on water cock bracket with cable retaining clip.



BE333

Fig. BE-48 Water cock

SPECIFICATIONS

Item	General use	Extremely cold weather use
FAN MOTOR		
Rated power consumption	12V less than 36W	12V less than 55W
Revolution rpm	3,600	2,800
Fan dia. mm (in)	110 (4.331)	110 (4.331)

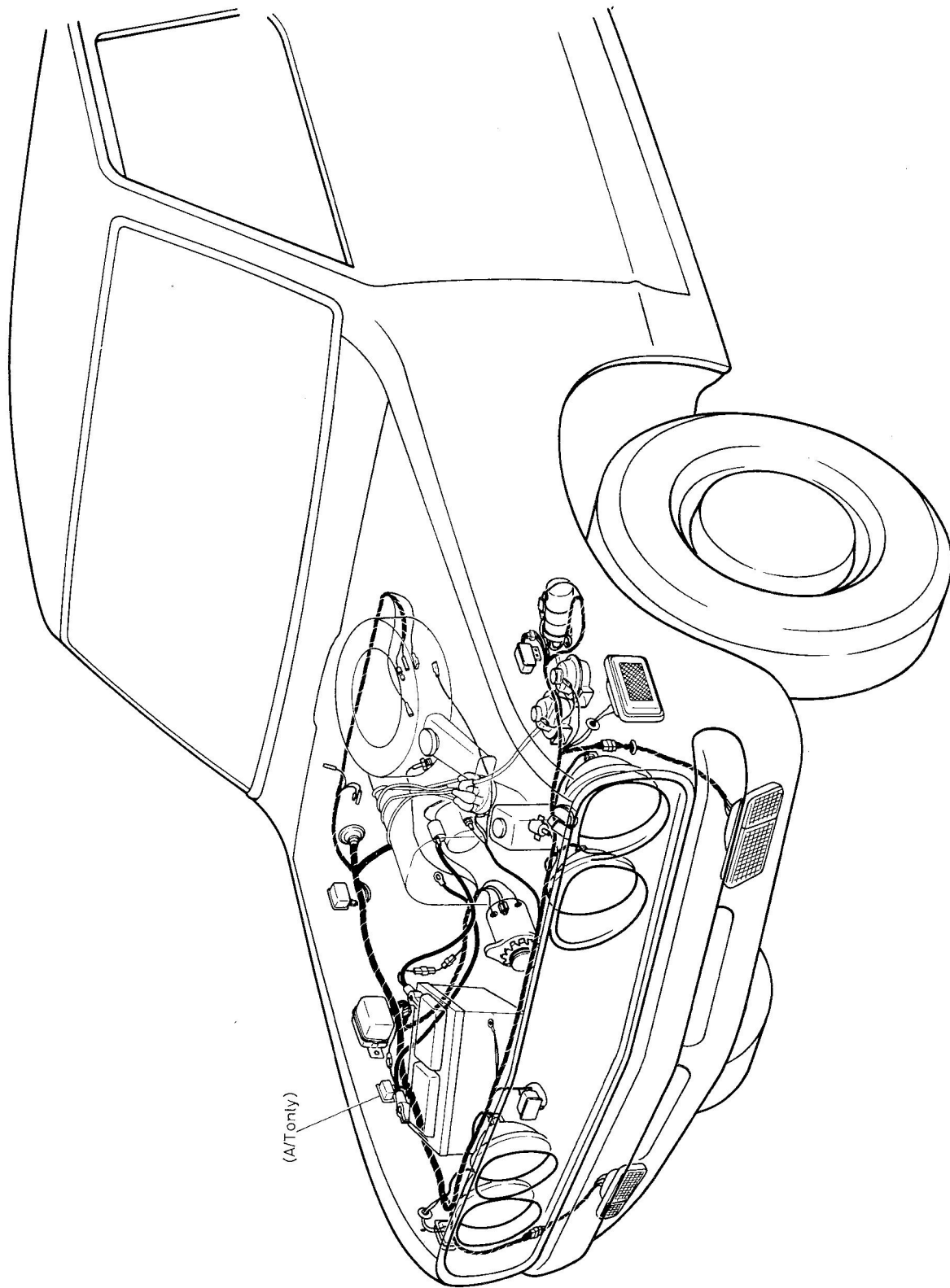
BODY ELECTRICAL SYSTEM

SERVICE JOURNAL OR BULLETIN REFERENCE

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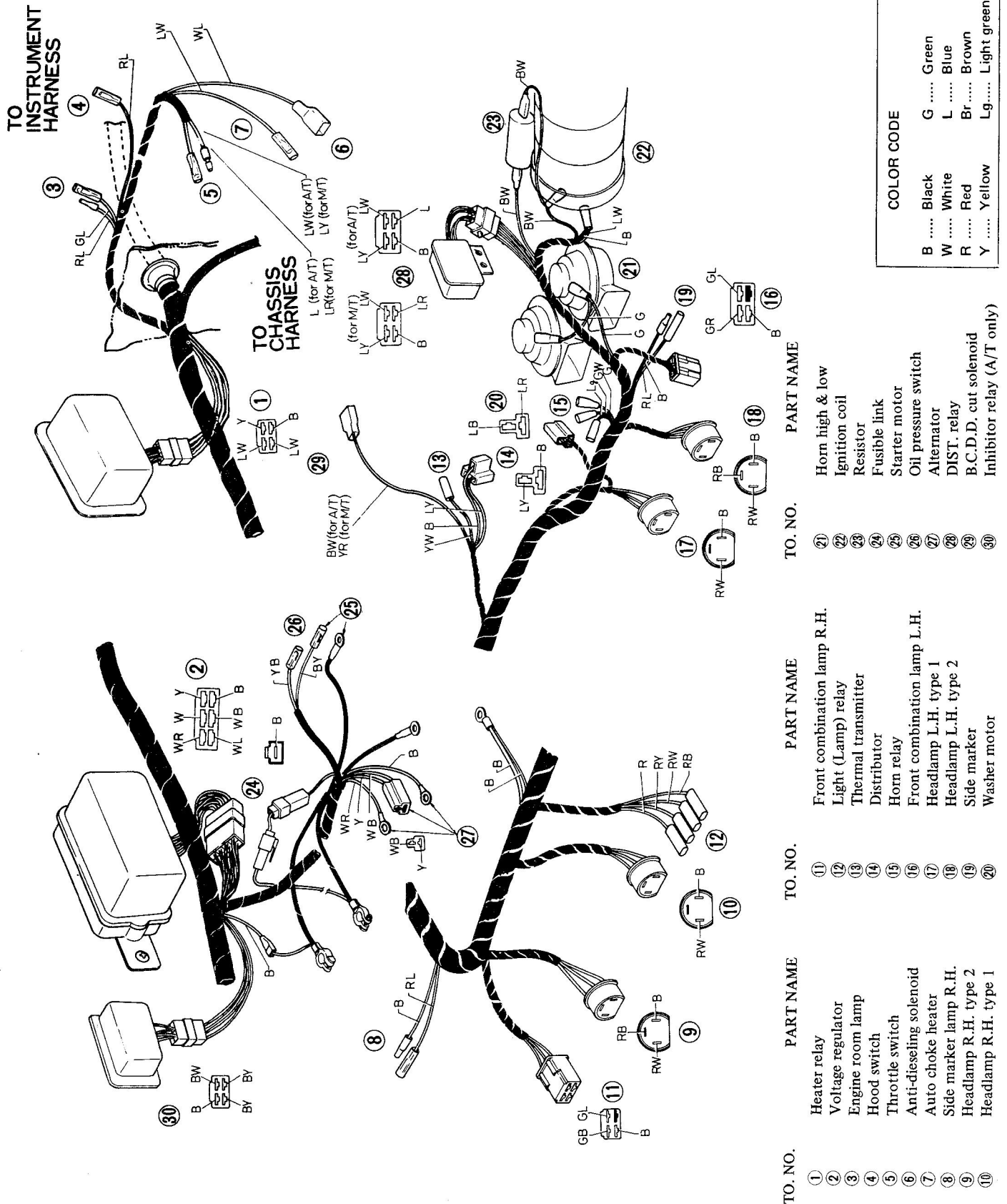
USA & Canada



BE398

Fig. 54 Engine compartment

BODY ELECTRICAL SYSTEM

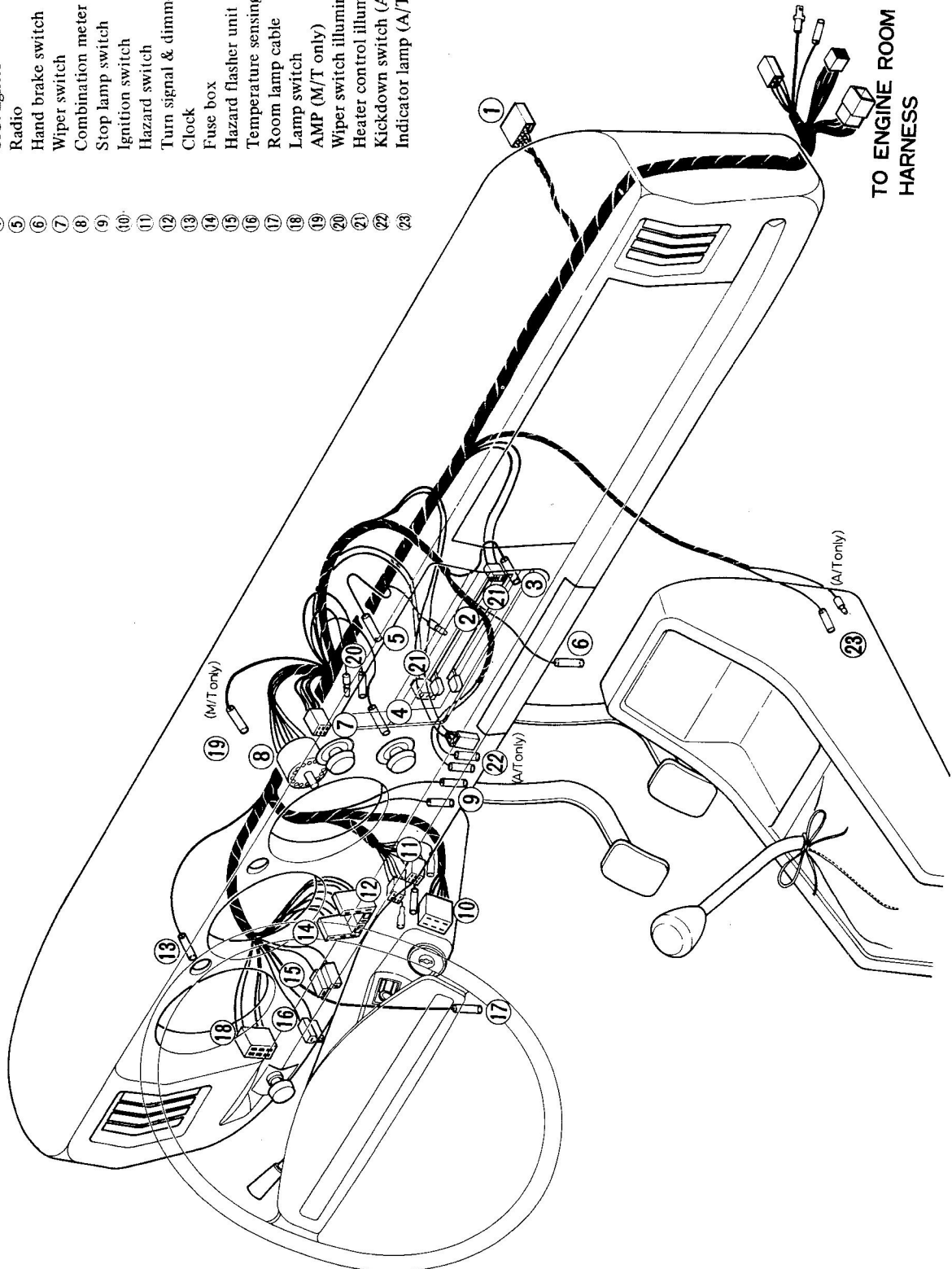


BE399
Fig. 55 Engine compartment

BODY ELECTRICAL SYSTEM

USA & Canada

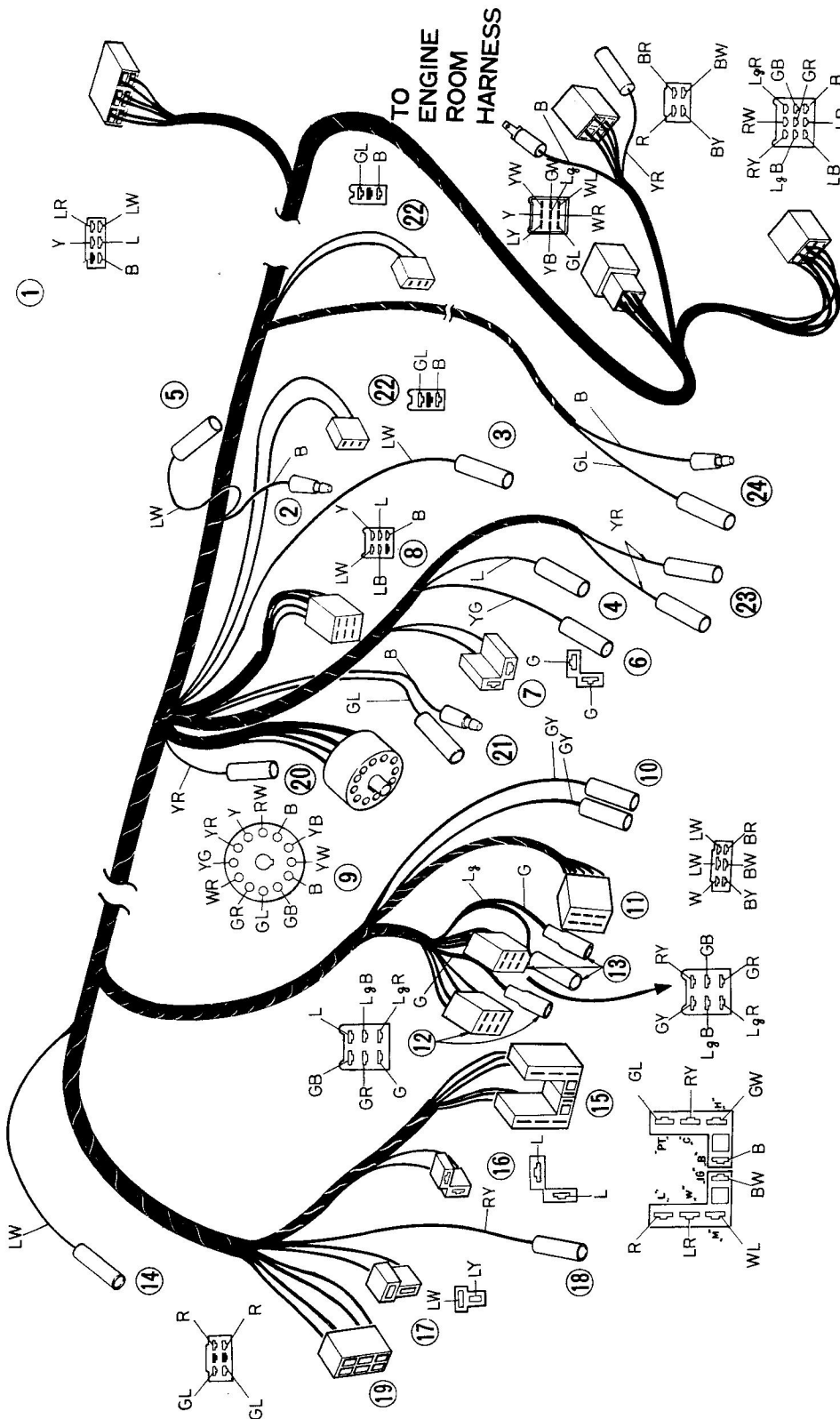
TO. NO.	PART NAME
①	Wiper motor
②	Heater switch
③	Heater motor
④	CIG. lighter
⑤	Radio
⑥	Hand brake switch
⑦	Wiper switch
⑧	Combination meter
⑨	Stop lamp switch
⑩	Ignition switch
⑪	Hazard switch
⑫	Turn signal & dimmer switch
⑬	Clock
⑭	Fuse box
⑮	Hazard flasher unit
⑯	Temperature sensing switch
⑰	Room lamp cable
⑱	Lamp switch
⑲	AMP (M/T only)
⑳	Wiper switch illumination lamp
㉑	Heater control illumination lamp
㉒	Kickdown switch (A/T only)
㉓	Indicator lamp (A/T only)



BE400

Fig. 56 Instrument

BODY ELECTRICAL SYSTEM



COLOR CODE

B ..	Black	G	Green
W	White	L	Blue
R	Red	Br	Brown
Y	Yellow	Lg	Light green

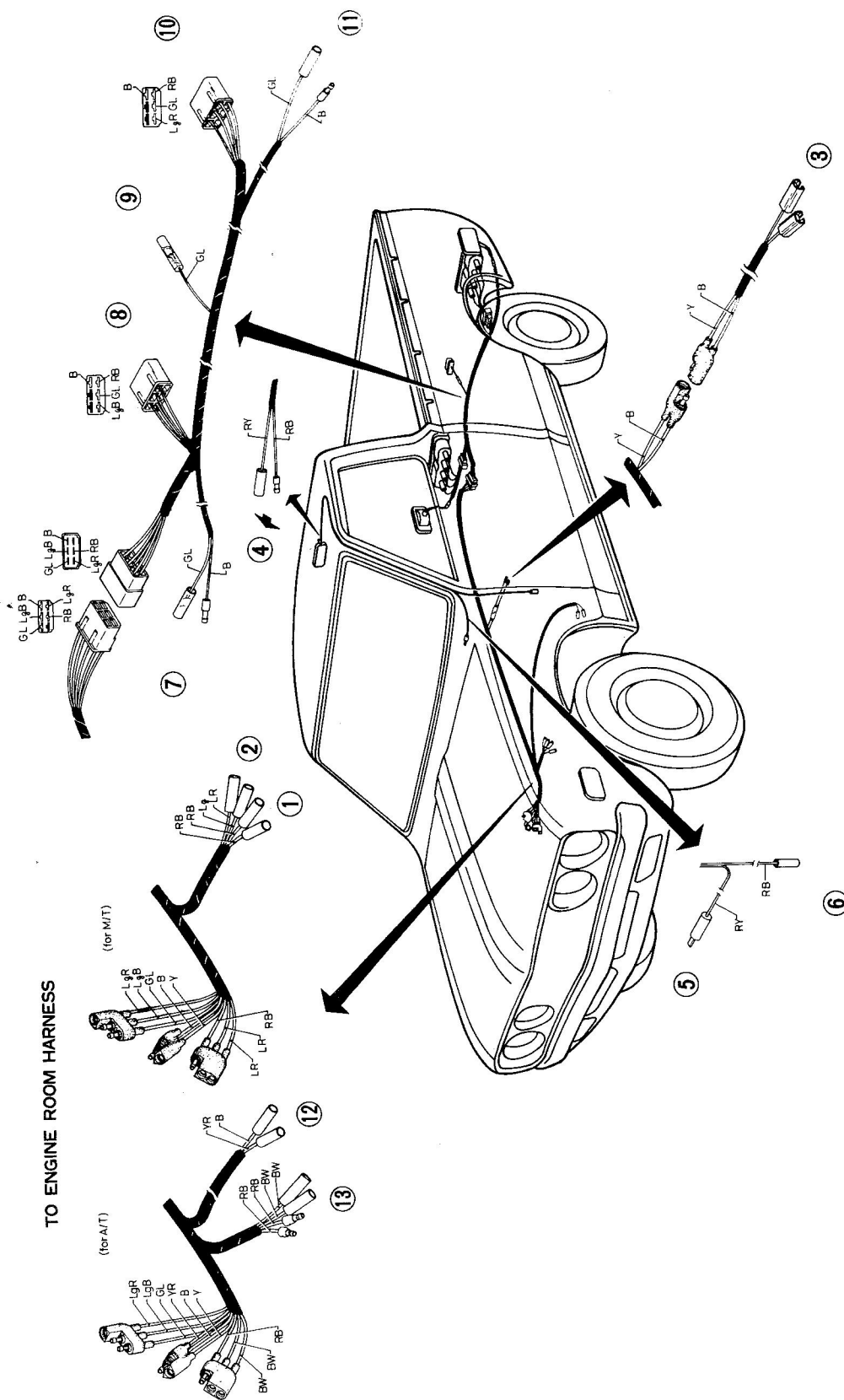
TO. NO.	PART NAME	TO. NO.	PART NAME
①	Wiper motor	⑬	Turn & dimmer switch
②	Heater switch	⑭	Clock
③	CIG. lighter	⑮	Fuse box
④	Heater motor	⑯	Hazard flasher unit
⑤	Radio	⑰	Temperature sensing switch
⑥	Hand brake switch	⑱	Room lamp cable
⑦	Flasher unit	⑲	Light (Lamp) switch
⑧	Wiper switch	⑳	AMP (M/T only)
⑨	Combination meter	㉑	Wiper switch illumination lamp
⑩	Stop lamp switch	㉒	Heater control illumination lamp
⑪	Ignition switch	㉓	Kickdown switch (A/T only)
⑫	Hazard switch	㉔	Indicator lamp (A/T only)

BE401

Fig. 57 Instrument

BODY ELECTRICAL SYSTEM

USA & Canada



TO. NO.	PART NAME	TO. NO.	PART NAME
1	Back-up lamp switch	9	License lamp
2	4th lamp switch	10	R.R., combination lamp L.H.
3	Tank unit	11	Side marker lamp L.H.
4	Room lamp	12	Kickdown solenoid
5	Instrument harness	13	(Down shift solenoid)
6	Door switch		Inhibitor switch
7	Side marker lamp R.H.		
8	R.R., combination lamp R.H.		

BE402

Fig. 58 Body